

**THE
PREDICTION OF OVERT BEHAVIOR
THROUGH THE USE OF
PROJECTIVE TECHNIQUES**

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THE PREDICTION OF OVERT BEHAVIOR THROUGH THE USE OF PROJECTIVE TECHNIQUES

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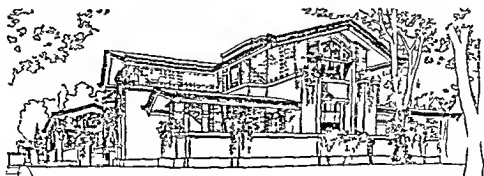
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FOREWORD

The reports in this *monograph* constitute the proceedings of a symposium presented at the Annual Convention of the American Psychological Association, in Cincinnati, Ohio, September, 1959. This symposium on "The Prediction of Overt Behavior Through the Use of Projective Techniques" was sponsored jointly by the Society for Projective Techniques and the Division of Clinical Psychology of the American Psychological Association. At the invitation of Dr. Gordon Derner, then President-elect of the Society for Projective Techniques, Dr. Arthur C. Carr assumed responsibility for organizing the symposium in terms of the choice of topic and structuring of the program.

In view of the intense interest expressed by many concerning this program, it appeared desirable to make the symposium proceedings available in permanent form. Whether approached as a study of the prediction of overt behavior, or as a guide to projective test interpretation, or as an elucidation of the possible etiology and psychodynamics of overt sexual psychopathology, this volume represents a contribution which it is believed will be of interest to students of human behavior.

ACKNOWLEDGMENTS

Special appreciation is expressed to the numerous individuals who contributed to the success of the symposium presented herein. Dr. Lawrence C. Kolb, Director, New York State Psychiatric Institute, initiated the over-all project on divergent sexual behavior in identical twins. Dr. Gordon Derner, President of the Society for Projective Techniques, gave special encouragement and support to this symposium. Invaluable assistance was also given by Dr. William N. Thetford and Dr. Helen Schucman. Devoted secretarial assistance by Mrs. Marion Sexton, Miss Carolyn Rosen, and Miss Patricia Fleming made it possible to meet the publication deadlines. Final indebtedness must be expressed to Dick and Tom for their voluntary participation in the project.

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**THE
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INTRODUCTION

ARTHUR C. CARR, PH.D.

The purpose of the symposium published in this volume was to assay the extent of present knowledge of the major projective techniques when used for predicting overt behavior. Participants included Bertram Forer (Sentence Completions), William Henry (TAT), Max Hutt (Bender-Gestalt test), and Zygmunt Piotrowski (the Rorschach test), with Evelyn Hooker as discussant.

The problem of predicting overt behavior from projective techniques is a challenging one, and one which is not always handled successfully. Although clinical psychologists sometimes appear especially gifted in the art of predicting specific overt symptoms and behavioral reactions from projective test responses, the research evidence is much less impressive.

There is perhaps no study more relevant to this problem than that of Evelyn Hooker (2-4) on the adjustment of the male homosexual. In one of the most significant psychological studies of the past decade, she has shown that experts could not distinguish Rorschach protocols of homosexuals from those of a carefully matched heterosexual group. Her findings challenge many of our assumptions regarding the utilization of projective techniques, as well as our conceptions of adjustment and normality. The results of this study should not be disregarded, in view of the importance which prediction plays in our science. In view of such provocative research findings, it is imperative that we formulate more precisely the underlying principles for inferring overt behavior from projective test responses.

At the present stage of our knowledge, the validity of projective tests rests upon relating the inferences derived from them to numerous data concerning the patient's dynamic functioning at various levels of personality organization. One of the major problems in the use of any projective technique is to relate a systematic theory of personality to a definitive evaluation of the

patient's levels of integration, insofar as these are revealed by any given technique. It is for this reason that no single available test can replace a well chosen test battery (1). An awareness of the limitations of existing projective techniques, however, should not make us doubt their present and potential contribution. Instead, it should encourage us to make more explicit the theoretical constructs and operations which have contributed to their unique status in clinical psychology.

In structuring this symposium, each participant was asked to consider a particular projective technique from the standpoint of the level of personality functioning which it presumably taps, giving special emphasis to the prediction of overt behavior. It was suggested that, where possible, an attempt be made to formulate principles and general rules of interpretation useful for this purpose, making explicit their underlying assumptions. Needless to say, this posed a formidable task for our participants.

To provide a basis for common illustrative material, test protocols on a pair of identical twins were made available to our participants (Appendix). One twin, Dick, has been consistently overtly homosexual for many years. His brother, Tom, has been consistently overtly heterosexual, apart from one or possibly two adolescent homosexual episodes. Test protocols were obtained on both twins before and after Tom's psychoanalysis, in 1957 and 1959 respectively.*

The projective test data on these twenty nine year old brothers appeared especially appropriate for consideration because in spite of their divergent overt psychopathology, the underlying motivational patterns are often convergent. These patterns are sometimes expressed in strikingly identical projective test content with the expression of pathological and idiosyncratic elements which often appear more similar than dissimilar. This finding is consistent with the test records available on a limited number of pairs of other identical twins also having diverse overt

*These records were gathered as part of a study on divergent psychopathology in identical twins at the New York State Psychiatric Institute. Participants in this study include Dr Lawrence C Kolb, Dr John A Rainer and Dr Alvin Mesnikoff. See *Homosexuality and Heterosexuality in Identical Twins* (Rainer, Mesnikoff, Kolb & Carr) *Psychosomatic Medicine*, 22 No 4 July August 1960.

psychopathology. It is, however, in contrast to the results of the classic study by Troup (5) in which experts had difficulty in matching Rorschach protocols of identical normal twin children.

Of further theoretical and practical interest, and consistent with the general findings of Hooker, it appeared extremely difficult to predict the twin's overt psychosexual adjustment by means of the usual test criteria. Thus, these test protocols appeared ideal for purposes of the symposium.

Each of the participants in this symposium has made significant contributions to projective test interpretation and to the science of psychology. It is a pleasure to introduce this distinguished group.

REFERENCES

1. Carr, A. C.: The psychodiagnostic test battery: rationale and methodology. In D. Brower and L. E. Abt (Eds.), *Progress in Clinical Psychology*, Vol. III. New York, Grune & Stratton, 1958.
2. Hooker, E.: A preliminary analysis of group behavior of homosexuals. *J. Psychol.*, 42:217-225, 1956.
3. Hooker, E.: The adjustment of the male overt homosexual. *J. proj. Tech.*, 21:18-31, 1957.
4. Hooker, E.: Male homosexuality in the Rorschach. *J. proj. Tech.*, 22:33-54, 1958.
5. Troup, E.: A comparative study by means of the Rorschach method of personality development in twenty pairs of identical twins. *Genet. Psychol. Monogr.*, 20:461-556, 1938.

SENTENCE COMPLETIONS

BERTRAM R. FORER, PH.D.

PART I

The prediction of behavior by means of psychological tests necessitates clarification of what is to be predicted. The tools, operations and methods of prediction must be geared to the nature of the predictive task. Let us, therefore, attempt to delineate kinds of predictive tasks and to consider what is involved in accomplishing them. Here are several possibilities:

1. Which of several possible qualitatively different acts will occur in a specified situation? Example: If a person is knocked down by someone, does he fight, cry, run, hallucinate? Let us call this *response prediction*.

2. How much of a given psychological something will be displayed in a specified situation? Example: When he felt angry, how intense was his anger, varying from feeble protest to homicide? Let us call this *intensive prediction*.

3. In which situations will a given act be performed to at least some minimum degree? This is *situational prediction*.

4. How much instigation or environmental pressure is necessary to evoke a response of a specified nature or intensity, such as homosexual fellatio? This might be called *threshold prediction*.

These four predictive tasks are concerned with behavioral specificities and with situational determinants of behavior. We might think of these tasks as *extrinsic* predictions in that they involve qualitative and/or quantitative details of behavior which are objectively correlated with situational facts. The psychological substance which mediates the correlation can often be disregarded and the predictive method can consist entirely of an empirically derived regression equation in some instances or a clinical inference in others.

Suppose, now, that we choose to disregard concrete behavior and specific reality situations and turn our attention to the psycho-

logical substance: how the individual deals, may deal or has dealt with the myriad situations, internal and external, to which he is exposed. We might, then, ask such questions as these:

1. What kinds of situations or patterns of relationships characterize his way of life? What might his life be like in the future? Will he be homosexual or heterosexual; which vocation will he choose?

2. What patterns of conflicts, attitudes, aptitudes, motives, psychodynamics, defenses and traits characterize him? What is his diagnosis?

These questions shift the emphasis away from the outer world and specific behaviors toward abstract conceptualizations of behavior and to the relatively enduring intrapsychic system. The data are essentially endogenous processes and our task might be conceived of as *intrinsic* prediction.

The two kinds of prediction, intrinsic and extrinsic, differ in the kinds of behavior, degree of generality or specificity, concreteness or abstractness, and in the relative importance of endogenous and exogenous factors that determine it. In terms of the operations involved, they differ in the nature of the stimuli or tests and in the amount of clinical inference employed.

The psychological data from which predictions and clinical inferences are made have their source in the interaction of exogenous and endogenous processes. The exogenous factors with which we are dealing are projective test stimuli. And we find that for any person the data vary with the stimuli, often appearing to be contradictory. Contradictory responses are taken to represent different levels of psychological functioning or organization. We assume that these responses represent alternative endogenous inclinations to action and that there exist both situational and other psychological functions that exercise a modulating, redirecting, selecting or otherwise modifying role. At this point we might suggest that accurate prediction requires a complete assessment of all of the inclinations and controlling mechanisms and all of the situational possibilities as well. We need to know how the person deals with all impulses and all situations. Our method of discovering this information is to control and manipulate the stimuli to which responses are given. The statement, "sucking on a breast," will

have different predictive implications depending on whether it is given in response to Rorschach card 10, TAT card 11, or sentence stem "I used to daydream about. . ." (2).

One of the differences in significance stems from the amount of stimulus definition. Implicitly we assume that less structured, more ambiguous, stimuli instigate responses representative of less conscious, more abstract, covert and deep, or latent behavior potentials, less probable of direct expression than those which occur in response to more structured items. The less the stimulus controls the details of a response, the more endogenous the process and the less accurate will be the *extrinsic* prediction from it. The negative findings of many studies of prediction from projective data may represent a failure to distinguish between *extrinsic* prediction and *intrinsic* prediction and to recognize the difference in psychic levels involved. Prediction from responses to structured stimuli about responses to unstructured stimuli is dubious in the same way as prediction from unstructured situations to structured ones. These cross-level predictions violate the concept that different levels represent different forms, intensities, thresholds and situational determinants of behavior and carry different probabilities of expression of a particular need. Successive levels show not continuity but discontinuity.

Forer (3) and others have suggested that the manifestation of a trait, wish, activity or affect in one test or at one psychological level carries with it little or no indication that it will occur at another psychological level or in a particular situation. The conclusion which we face is that projective test stimuli and social situations are not ordinarily isomorphic.

Since sentence stems are not equivalent stimuli to social situations, but may be more nearly so than inkblots, we are forced, in order to make *extrinsic* predictions, to take the following steps:

1. To approximate stimulus equivalence by designing stimuli that are likely on *a priori* or empirical grounds to overlap in stimulus properties those situations to which we wish to predict.
2. To provide a sample of stimulus-response data in the relevant areas of prediction.

The sentence completion test employed in this case was designed to provide stimulus samples in specialized areas of life that

are of predictive interest in most clinical situations (1). The items were oriented as much toward intrinsic as toward extrinsic prediction. Insofar as they were not tailor-made for these individual cases, the sentences have limitations for the present exposition. The fundamental concept behind this form of the test is as follows: If we assign affects, wishes, and actions to the ego, we can get some idea of the kinds of situation which the ego can accept as justification for them. If we exert external pressure such as criticism or failure on the ego, we can observe the ways in which the ego contends with it as a kind of work sample. A form of item which ought to be in the test, and is not, is of the nature of assigning a wish, act or affect to the ego to observe how intensely and in which forms it will be expressed. Examples: "Whenever I am angry, I. . ." and "When he was sexually aroused he. . ."

Two major kinds of scoring have been described for sentence completion protocols. Rotter et al (6) sets up a scoring system for estimating adjustment and obtains a single score which can be compared with empirical norms. Rohde's (5) method provides a profile of needs and other variables expressed quantitatively. My feeling is that such quantification may have psychometric value but has limited clinical utility because it fails to disclose the nature of the more complex integrative ego functions which juggle the probabilities and forms of action. Our orientation is to consider each item as a potentiality for action and to estimate relative probabilities by means of clinical comparison of the various items on dimensions such as the following:

1. *Situational determinants of specific affects, wishes and actions.* Inferences on this dimension include situational generality or specificity of the response. Example: Is the patient likely to be overtly homosexual in any situation, when intoxicated only, on his or her initiative, in military situations. Preferred and rejected objects are also important here.

2. *Thresholds.* How much stimulus pressure versus endogenous inclination is required for homosexual behavior? Still more specificity is called for. Can we estimate how much social pressure would be required in a given situation such as an evening party for the acting-out of fellatio wishes? We can set up a hierarchy of

situations which would define successively lower thresholds for general homosexual behavior.

- a. When forcibly mastered by several men.
- b. When intoxicated and in the Aleutian islands for two years.
- c. Seduced in a military installation.
- d. Active seeking of homosexual contact under rare circumstances.

- e. Active and frequent homosexual cruising when sober.

The present test does not provide anything like isomorphic stimuli for such questions, but some weak guesses can be made from other items which contribute to a picture of the endogenous system. However, we must anticipate that with limited knowledge of the hierarchic structure we may be 180 degrees wrong in making extrinsic predictions from this source.

3. Forms Can we set up some kind of probability hierarchy of forms of sexual behavior characteristic of our patients? We might consider here the psychosexual levels, active and passive roles, sex, age and size of objects and the like.

4. Intensity In the area of homosexuality we might find predictions enhanced by specifying frequency, exclusiveness of sex objects, and endogenous independence from situations. In such areas as aggression we can more clearly specify magnitudes.

PART II

The sentence completion test was administered to twin brothers and re administered two years later after the heterosexual twin had had psychotherapy. I have disregarded the retest protocols. Examining the initial sentence completions of the twins might enable us to make some such tentative inferences and predictions as these: Dick shows a higher threshold than Tom for accepting wishes for dependency and emotional closeness. Nine items (Nos. 2, 7, 17, 29, 37, 52, 74, 83, 98) ask for expressions of wishes * Tom expresses a need for love and relationships on three (Nos. 52, 74, 83). Dick expresses less need (No. 74), but emphasizes possessions (Nos.

*1 A copy of the sentence completion check sheet is appended to furnish an outline for the clinical areas approached by this form of the test. Different check sheets were developed for the children's and the vocational forms.

7, 52, 83). A characteristic difference between the twins appears in item No. 12, "I was most depressed when . . ." Dick says "I didn't get a bigger bonus"; Tom says, "I feel I was unloved." Inference: Dick avoids enduring relationships. Prediction: Dick is likely to cruise homosexually rather than establish a continuous relationship. If someone wished to become close to him, Dick would find fault and reject him. While Tom suffers with his awareness of a need to be loved, Dick sneeringly rejects it most of the time. Both show evidence of having experienced emotional rejection. In the items describing "reactions to rejection," Dick rejects the objects and the need, while Tom feels depressed (Nos. 14, 46, 82). On item No. 14, "When she turned me down, I . . .," Tom feels depressed and Dick says, "the hell with it."

Both twins have favorable things to say about sex (Nos. 18, 28, 40, 61), but the evidence is insufficient to say that either has indulged himself in it. Tom expresses guilt about real or fancied relations with older women (No. 24), suggestive of a "healthier" solution of his struggles than that of Dick who rejects love and marriage (Nos. 78, 92). Prediction: Tom is likely to seek women's companionship and a sexual relationship despite internal inhibitions; his sex may be counterphobic and guilt-laden. If a woman is warm and sympathetic, Tom is likely to seek a sexual relationship. Dick on the other hand is likely to identify in a hostile way with women, compete with them and reject them sexually as well as affectionally. Dick's sexual interest is narcissistic, involves rejecting closeness with objects, is more likely phobic with women. He has a lower threshold for acting-out, and for expressing his own wishes, partly to deny feelings, even though he may experience subsequent guilt. Dick ridicules conventions (No. 59) and shows a lower threshold for the expression of angry rebellious feelings. Six items are structured *a priori* to find the situational determinants of aggression (Nos. 19, 34, 55, 75, 86, 89). Tom requires more provocation than Dick does. Dick gives three rather facetious or trivial responses: someone not soaking dishes after a meal (No. 19), someone not finishing the floors of his home (No. 34), a woman flushing a baby down the toilet (No. 89). Tom omits one aggression item (No. 75), his only omission, hence suggestive of a struggle against anger. Dick's responses suggest much endogenous anger (No. 86) which

SENTENCE COMPLETION CHECK SHEET

Name _____ Age _____ Sex _____ Marital _____ Education _____ Date _____

[illegible]

LOVE MARRIAGE	SEXUAL STIMULI	RESPON- SIBILITY	FAILURE	REJEC- TION	AGGRES- SION	D REACTIONS TO:	GUILT	FAILURE FRUSTRA	DEPRES- SION	ANXIETY FEAR	AGGRESSION	C. CAUSES OF OWN
11	18	1	3	14	22	Unclear	4	6	12	8	19	Unclear
32	28	31	25	46	42	Denial	24	27	45	47	34	Denial
58	40	62	41	67	51	Omission	43	44	56	49	45	Denial
78	53	68	48	62	72	Acceptance	44	57	64	56	75	Aggression (Press)
92	61	85	63	90	80	Aggression	59	65	97	87	86	Aggression (Own)
						Anxiety			100		89	Authority
						Avoidance						Criticism
						Dependency						Economic
						Depression						Failure
						Failure						Family
						Fear						Father
						Guilt						Females
						Hostility						Future
						Intellectualize						Health
						Passivity						Inadequacy
						Pleasure						Males
						Rejection						Mother
						Resisting						Others' Welfare
						Somnolence						Rejection
						Success						Physical Events
												Sex

F MOODS

F AGGRESSION: Intropunitive ___ Hostility ___ Aggression ___ Denial ___

G. AFFECTIVE LEVEL (No. of affectively toned responses) _____

he accepts rather easily. Prediction: In a variety of situations Dick will express anger and hostility of moderate intensity. Tom is likely to hold back his anger, may at times explode and regret it. In addition Dick blames situational factors for his failures and frustrations (Nos. 6, 27, 65), whereas Tom blames himself more often. The avoidance of responsibility which characterizes Dick's responses lends support to the prediction that his threshold for anger and other forms of acting-out is lower than Tom's.

We predicted from the protocol that Dick was more likely to act-out homosexually, in a greater variety of circumstances, with less situational provocation and with less concern about the nature and welfare of the object than Tom might do. We would not predict that Tom might not have homosexual impulses or never act them out. But his threshold for such activity is higher and at the most overt levels he will seek heterosexual objects.

We have been asked how first and third person sentence stems differ in their intrinsic and extrinsic predictive utility. Our hypothesis is that first person items are more closely congruent with extrinsic prediction and are thus more nearly isomorphic with social situations and public behavior, whereas third person items more likely evoke responses representing deeper psychic levels. With Hanfmann and Getzels (4), we look to the disparities between first-and third person responses for indications of relationships among psychic levels and as cues to the modulating ego functions which are necessary for making extrinsic predictions.

As a crude demonstration we selected from twelve areas of the test pairs of first person (Nos. 6, 8, 12, 14, 19, 24, 25, 31, 42, 52, 53, 92) and third person (Nos. 3, 4, 5, 27, 51, 55, 56, 61, 62, 78, 83, 100) items. Our impression was that there were greater differences between the twins on the first person than on the third person items. We take this to mean that although the twins may have similarities in their inner problems and motives and dynamics, the top-level ego controls of behavior differ considerably. Furthermore, Tom manifests greater differences between his first and third person responses than Dick does. We think that this reflects Tom's greater sensitivity and responsivity to situational factors, his greater intrapsychic conflict and his greater differentiation between adjacent psychological levels. His overt behavior ought to be easier to

predict extrinsically. Dick's relative independence from situational determinants suggests deeply entrenched character defenses, slower therapeutic change, but greater intrinsic predictability.

This brief and ill-documented illustration can give only a glimpse into some of the factors operating in the prediction of behavior from the sentence completion test. We first tried to clarify the nature of the predictive problem. We then set up a sample predicting situation by assigning the ego varied test tasks so that we could observe its ways of dealing with internal and external stimuli, its thresholds for acceptance of various acts, affects and wishes, in order to make relatively direct predictions from some items modified by evidence regarding the probabilities and circumstances of concrete behavior. By controlling the stimuli in a fairly structured test, we may have obtained some basis for extrapolating from this stimulus-response situation to others.

REFERENCES

1. Forer, B. R.: A structured sentence completion test. *J. proj. Tech.*, 14:15-30, 1950. (Distrib. by Western Psychological Services.)
2. Forer, B. R.: The latency of latent schizophrenia. *J. proj. Tech.*, 14:297-302, 1950.
3. Forer, B. R.: Research with projective techniques, some trends. *J. proj. Tech.*, 21:358-361, 1957.
4. Hanfmann, E. and Getzels, J. W.: Studies on the sentence completion test. *J. proj. Tech.*, 17:280-294, 1953.
5. Rohde, A. R.: *The Sentence Completion Method*. New York, Ronald, 1957.
6. Rotter, J. B., Rafferty, J. E. and Schachtitz, E.: Validation of the Rotter Incomplete Sentences Blank for college screening. *J. consult. Psychol.*, 13:348-366, 1949.

ADDENDUM*

Rereading my report in the light of what Dr. Hooker has said at the original presentation, I am forced to admit to preconceptions

*Prior to publication of the symposium proceedings, participants were invited to make additional comments either in regard to Dr. Hooker's discussion or test data not previously interpreted

about the nature of homosexuality. In fact, the theoretical system which I employ in evaluating test data consists of a host of preconceptions. I doubt that any clinician can be truly objective about the data he processes without reducing the nature of his predictions to those of the order of simple restatements. It is at once the strength and the deficiency of the clinician that he brings something unique to his data: theoretical information and hypotheses, reorganization and extrapolations at the price of leaving the data and being idiosyncratically wrong. We trust that proof of his incorrectness enables him to amend his preconceptions and his methods of restructuring the data.

After this apologia, let us return to the twins.

At one point we implied, but did not state, that Dick seems better "adjusted." His apparently greater consistency, his relatively greater independence from stimuli suggests a fairly solid and structured endogenous system with fewer competing responses. If he were to be labelled clinically, we should consider him to have a character problem (alloplastic) in which struggles are resolved at a rather deep level. Tom seems to be openly neurotic (autoplastic), less comfortable and probably less effective. He had not, at least before therapy, achieved much in the way of a final resolution of his internal conflicts. He is somewhat at the mercy of stimuli rather than able to use them to his own ends as Dick is able to do.

We were also unclear in our original report about the differential predictability of the twins' behavior. Our most reasoned speculations at this point are these. Dick's relative autonomy from situational determinants of behavior, exemplified by the similarity of first and third person items and by the evidence of an alloplastic adjustment, suggest that his behavior is more predictable in an intrinsic fashion than Tom's. That is, knowledge of Dick's dynamics should permit us to make a fairly valid description of how he will order his life, even though we might have difficulty in predicting what he will do in many concrete situations.

Tom, on the other hand, is internally inconsistent, in conflict. Knowledge of his dynamics is less likely to enable intrinsic predictions of the same degree of clarity as Dick's. Yet, because of his responsivity to stimulus variation, we should be able to make more accurate extrinsic predictions from specific test data.

Speculating further, we should be intrigued to learn whether the Rorschach might be the best predictor of Dick's behavior and the sentence completions the best predictor of Tom's.

THE THEMATIC APPERCEPTION TEST

WILLIAM E. HENRY, PH.D.

PART I

It might readily be assumed that there is no need to give consideration to the prediction of overt behavior from the various projective instruments. It is claimed, after all, that the realm of these instruments is that of the covert—that realm of feelings and assumptions of which the individual is at best dimly aware and which, in any case, he cannot verbalize directly.

Beyond the question of the validity of statements about overt behavior made from a projective technique, there occurs first the question of why one should bother. Why propose an intelligence quotient when a standardized intelligence test is available? Why describe the relationships to the parents when a direct interview on these matters with both the subject and the parents is possible?

I believe that there are answers to this first question which would, in varying degrees, make justifiable the devotion of a certain section of projective reports to predictions of overt behavior. I should like to comment briefly on only one of these answers. It is the answer that rests on the logic that behavior is dynamically motivated. We do assume that behavior bears some discoverable, if not direct, relation to underlying dynamics. And conversely, we do suppose that a particular pattern of inner dynamic relations has some greater tendency to be related to one pattern of overt behavior than to another. We are inclined to note the interconnection of the overt and the covert only after we have been informed of the overt—the “Aha” phenomenon of clinical psychology.

We are much less inclined to submit to examination our presumptions of these interconnections by stating them in advance. In case of error, we could of course point out that the

relations between underlying dynamics and overt behavior are obscure and wondrous and that further study is necessary. In this we would, of course, be quite correct. The availability of this excellent excuse, however, should encourage us to try our hand more regularly. Our predictive errors and our successes could teach us much, both about our own knowledge and blind spots, as well as about the heart of the matter, that web of connections between overt and covert, desire and action, manifest and latent.

The success of predictions of overt behavior is, however, greatly limited by our very scanty knowledge of what psychological issues will manifest themselves in which kind of behavior under what circumstances of correlative internal dynamics and of external pressures and sanctions.

In the instance of TAT stories, we have been repeatedly shown that the relation between personality events, described in terms of Murray-needs, and overt behavior is at best a weak one. Murray (5) and subsequently Sanford *et al.* (7), and other investigators have demonstrated correlations from zero to .40 between needs and some measure of overt behavior. The higher of these correlations, however, are found only when dealing with certain needs and not others, and then only with respect to certain kinds of overt behavior. Murray suggested correlations of .40 between the overt and covert for such needs as abasement, dominance, nurturance, passivity, dejection, but none for aggression and achievement, and a negative relation for sex. It has been suggested that the question of what needs are sanctioned or punished socially would be an integral factor in their overt expression. This seems unquestionably relevant, though as Lindzey (3) points out, the absence of a positive correlation for achievement in Murray's young American adults and the negative relation for sex certainly suggests that the relation is more complex than this.

Other investigations throw light on some elements of this complexity. Certainly the observations of McClelland, Atkinson, Clark, Lowell (4) and their colleagues on Achievement scores of persons in a wide variety of personal and social circumstances help clarify certain of these relations. Experimental studies focused upon aggression have shown that the more substantial relation-

THE THEMATIC APPERCEPTION TEST

WILLIAM E. HENRY, Ph.D.

PART I

It might readily be assumed that there is no need to give consideration to the prediction of overt behavior from the various projective instruments. It is claimed, after all, that the realm of these instruments is that of the covert—that realm of feelings and assumptions of which the individual is at best dimly aware and which, in any case, he cannot verbalize directly.

Beyond the question of the validity of statements about overt behavior made from a projective technique, there occurs first the question of why one should bother. Why propose an intelligence quotient when a standardized intelligence test is available? Why describe the relationships to the parents when a direct interview on these matters with both the subject and the parents is possible?

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3. The existence of cultural restriction or encouragement of behavior appropriately expressive of that motive, including the social group appropriateness of various forms of expression of the motive.

4. The opportunity for overt expression—including presumably the past history of such opportunity throughout some sector of the life history of the individual.

5. The ego strength of the individual—a factor not directly referred to above, but one which might be thought to be influential in all spheres of the individual's life.

In other words, the prediction of the overt expression of various personality states hinges upon the successful estimation of the interactions of these issues—some of which relate to the attendant internal dynamics (whether in the past or present) and some to the social circumstances of the individual's life—whether in the past or present. Explicit in this summary should be the recognition that variance is also in part attributable to those areas of overt behavior and of internal motive under consideration.

PART II

Even recognizing this very gross outline of the complexities, we still require some guideline to the utilization of these factors in making individual predictions from single records. I should like to suggest two such guidelines, two logics for predicting the overt behavior in question here. The two cases provided us by Dr. Carr more than adequately attest to the difficulties inherent in such prediction. Since we were informed in advance as to which of these twins was heterosexual and which homosexual, I shall be able to spare you the recital of my impeccable logic in deciding which was which. I should like to present first a logic which is sufficient, in this instance, to the problem of predicting the particular area of motive and behavior. To do so I would like to call attention to certain knowledge and background information available in the cases. I will ignore the possible symbolic cues involved in the names Tom and Dick—since we know these names to be fictional and since, in any event, it is not clear

ships are found when needs other than the principal one under study are taken into account, and when the past social experiences of the subjects are considered in more detail.

Subsequent to a more complex statement of these overt-covert relations by Sanford and his associates (7), Mussen and Naylor (6) varied the social class background of a group of subjects to bring into focus the social sanctions regarding aggression in middle and lower class boys. They subsequently introduced a further complexity of internal dynamics by utilizing a measure of the anticipation of punishment—an internal residue, presumably, of the extent to which within each class group, aggression had been punished. Their results support the proposal that the expression of nAggression will vary according to the amount of negative sanctions on aggression in the class group and according to the extent to which the individual anticipates punishment as a result of such expression. Kagan (1) has also shown that expression will vary in terms of the strength of the need, the degree of anxiety surrounding the need, and, further, according to the kind of aggressive behavior—the relations being more clear-cut in the case of aggressive behaviors more closely analogous to his overt criterion.

Lesser (2) has shown a similar relation to the maternal attitude toward aggression—a significant positive relation in children of mothers who permitted the expression of aggression, and a significant negative one in cases of mothers who suppressed it.

These studies serve to bring into focus some of the great complexities surrounding the expression of overt behavior—at least in the case of certain personality needs—and to highlight the difficulties of predicting such expression from individual TAT records.

One might summarize some of these issues by reference to the five factors relating to need expression outlined by Sanford *et al.* (7).

These are:

1. The strength of the motive.
2. The relationship of that motive to other characteristics of that individual, including such issues as the anxiety which surrounds it or the anticipation of negative sanction upon its overt expression.

of the internal dynamics of the two cases, nor does it depend upon the relation of these dynamics to what we might presume to be the dynamics of homosexuality, nor does it depend upon any formal diagnostic signs of homosexuality.

I have stated my comment on these cases from this vantage point, rather than that of internal dynamics, to emphasize the explicit use of presumptions and knowledge often used only implicitly in such predictions, and in part out of temerity—recalling the difficulties experienced by the more skilled clinicians in the study previously reported by Dr. Evelyn Hooker, our discussant.

This is not to say that I do not believe that the internal dynamics have something to do with the prediction of behavior. There is no question that they do, and no question that statements beyond the two I have made—ego identity and selection of the homosexual twin—would require such analysis. However, successful prediction based on the internal dynamics assumes that we know what pattern of dynamics, once found in the case, to label heterosexual and which homosexual. It presumes, in other words, a matching of dynamics found in an individual case with some "norm" of dynamics for a particular personality group. It is apparent, I believe, that except in certain extreme and/or special homosexual groups, our knowledge of the varieties of dynamics involved in homosexual life-styles (not to mention heterosexual ones) is insufficient to make such a predictive venture successful. To approach the prediction in another way, applying another logic, we may look more closely at the actual protocols.

Further examination of the 1959 records of Tom and Dick will show additional features of similarity and dissimilarity. First, as may also be the case with the other protocols, the manifest similarities in content are so great as to suggest a hoax—which Dr. Carr assures us, is not the case. Highly similar plots phrased in similar thought content occur again and again—attesting possibly to the supposition made earlier of their close relationship. In 4, both see a heterosexual scene peopled by movie characters. In Dick, it is Linda Darnell and Paulette Goddard. In Tom, the plot is similar, the characters Rory Calhoun and Linda Darnell. In their choices of Best Liked pictures, they both select 14 and 2.

whether symbolic phallic reference implies the utilization of that object in a heterosexual or homosexual context.

First, we know they are identical twins. While we may suppose little from the identity, we do perhaps suppose that they were unusually intimate in their developmental years and hence that the resolution of sexual identifications was in some sense a joint venture.

Secondly, we know that one of them, as our information tells us, "has been living an active homosexual life."

Thirdly, we know that the one of them underwent two years of psychoanalytic treatment, presumably, though we do not know this, from some sense of need.

Fourthly, we were also informed that it was the heterosexual twin who undertook this analysis.

I would submit that these data are sufficient to propose that if one twin presents a firm sense of identity and ego organization, he will be the homosexual twin. Up to this point, of course, we have not looked at the test protocols at all. To decide whether it is Tom or Dick, we need only examine the records for the general area of adjustment and ego identity—without concerning ourselves with other areas of dynamics. This logic is, of course, based on the four areas of information already given us—presuming for the moment that we do not know *a priori* which twin is which. In this sense, our predictive task is different from the task imposed by a quite different question—a question we are not asked—is one of these two persons homosexual? We know one is, we know the two persons have had intense personal interaction, and we know that the heterosexual one has had sufficient difficulty to undertake analysis. The secondary presumption is that the other twin, the homosexual one, did not have such difficulty, or at least resolved it without outside aid, and that he should be the one whose test protocol reflects this resolution. The two records, of 1959, differ considerably in at least one area of ego identity, and it is Dick who presents the clearest, most "mature", sense of identity and life purpose. He is therefore the homosexual twin.

It will be noted that this logic in no way depends upon the analysis of the individual test protocols from the point of view

Thus one might say that Dick has incorporated an initial father hostility, taking over for himself the assertive male elements; he has neutralized all female cathexes but without binding resentment; he has special open areas of positive identification in the peer male area, both as regards work and ego oriented activities, as well as affect and impulse activities. He thus becomes the active male, relating to females only in formal role-defined ways, and to males as the only real objects of affect and ego-relatedness—preferring sexually males younger in character.

Tom, on the other hand, remains tied and bound to unresolved images in all categories; the mother image he tries to please and satisfy but is not sure how; young females are objects of threat to him, principally via their sexuality; father and adult-maleness represent horror and corruptness; peer males are not understood. His only open area is that defined by the hypothetical possibility of incorporating the maternal imagery. He thus becomes the technically heterosexual person, preoccupied with the presently unsuccessful effort to resolve his horror of maleness by over-determined relations to women—probably older and maternal in character.

In summary, I believe we have available, in the case of the TAT several possible logics by which to explore the relations of personality dynamics and overt behavior. These logics occur at different levels of relation to inner dynamics and overt social pressures. I have illustrated here two such logics, both stemming more from ego and role levels than from levels of either direct social expectancies or deeply unconscious factors.

I would take it that one of the crucial next tasks with the TAT is that of systematically integrating such knowledge as we have of inner dynamics and overt behaviors. This of course must be done under conditions wherein the intervening concepts of analysis have greater stability than they now do and wherein the logic of a statement of a relationship is itself explicit and open to examination.

REFERENCES

1. Kagan, J.: The measurement of overt aggression from fantasy. *J. abnorm. soc. Psychol.*, 52:390-393, 1956.
2. Lesser, G. S.: The relationship between overt and fantasy aggression

At another level, however, we may briefly examine four areas—represented by cards:

6 BM—the area of maternal imagery and of the relation of child to mother.

7 BM—the area of paternal imagery and of the relation of child to father.

4 — heterosexuality and in particular, the image of same-age females—peer female.

14 — the image of maleness in relation to outer world events—peer male.

The logic here is, of course, that the sexual orientation of a person may be described by the imagery which he has developed in these areas.

Focusing primarily upon the area of interpersonal relations and upon these 4 roles as guides to the action of the person, one may point out certain differences:

	<i>Tom</i>	<i>Dick</i>
<i>Mother Image</i> (6 BM)	Affect is bound, subject enmeshed in need to relate to M.	M-image negative but neutralized. Affect relation blocked. M-figures cut off and relation denied.
<i>Father-Image</i> (7 BM)	Distrustful, but again affect bound Adult male defined as bad, corrupt	Resolution of negative F-image and adoption of assertive and independent maleness
<i>Peer Female</i> (4)	Denial of relation, F seen as "unreal," but still bound and need punish Undetermined nAgg female sexuality	Relation handled via secondary roles—movie characters. Minimal affect, neutralized as with M-image but more interactive.
<i>Peer Male</i> (14)	Identity confusion Denies Ach nAgg elements of maleness	Positive identification with assertive maleness, both affect and ego oriented.

of these two cases would be found in at least the four areas of Maternal Imagery, Paternal Imagery, Peer Female and Peer Male Imagery. In the 1959 records I felt that the prediction of overt homosexual or heterosexual activity could be made. Let it be clear that I would not always expect that to be the case from such data, nor that I would always expect to be right when such predictions do seem possible. A useful comparison can be made, however, by examining these same four areas in the 1957 records. I have followed the same procedure as with the later records and would note the following:

	<i>Tom</i>	<i>Dick</i>
<i>Maternal-Image</i> (6 BM)	Incomplete Mother-son relation mediated by outsiders. M-relation bound. No affect expressions present.	Relation to M neutralized and affect blocked. But assumes M able to sustain shock.
<i>Paternal Image</i> (7 BM)	Male defined as bad and encouraging of "badness" in son.	Male seen as bad but still some identification with F's autonomy.
<i>Peer Female</i> (4)	Exaggerated definition of female as negative. Separation of peer female sex and love.	Peer female relation handled via secondary movie plot. Denies personal relevance but not hostile.
<i>Peer Male</i> (14)	Partially open peer male area, but without identification. No masculine elements of assertion.	Positive identification with accomplishing maleness, both work and affect.

One can comment on these from one case to the other at this 1957 point as well as comparing them with their own records two years later.

In comparing them both for 1957, the record of Dick seems to be the more "normal" record. By this I merely mean that the utilization of his intellectual capacities seems better and easier than with Tom; he employs relevant affect and emotion in appropriate contexts. Tom, on the other hand, presents a more "disturbed" record

- as a function of maternal response to aggression. *J. abnorm. soc. Psychol.*, 55:218-221, 1957.
3. Lindzey, G.: The use of projective techniques in anthropology, social psychology and sociology. *Social Science Research Council Monogr.*, 1960, in press.
 4. McClelland, D. C., Atkinson, J. W., Clark, R. A. and Lowell, E. L.: *The Achievement Motive*. New York, Appleton-Century-Crofts, 1953.
 5. Murray, H. A.: *Thematic Apperception Test Manual*. Cambridge, Harvard University Press, 1913.
 6. Mussen, P. H. and Naylor, H. K.: The relationship between overt and fantasy aggression. *J. abnorm. soc. Psychol.*, 49:235-240, 1951.
 7. Sanford, R. N., Adkins, Margaret M., Miller, R. B. and Cobb, E. A.: Physique, personality and scholarship. *Monogr. Soc. Res. Child Develpm.*, 8.No. 34, 1943.

ADDENDUM*

The comments made in the paper above, delivered as part of the symposium, were based upon some general considerations and illustrated with the 1959 records of the twins. The possibility exists of extending these remarks to cover a broader sample of behaviors which might conceivably be predicted from the TAT. However, since the focus of this symposium was the prediction of the differential sexual orientations of these two cases, and since I have dealt with the broader topic elsewhere (1-3), I will comment here only on the resemblance of the 1959 records used to the 1957 records of those same cases.

I have already noted in my principal comments that our knowledge of the range of life styles which may be called homosexual or heterosexual is insufficient to provide a clear guide to some recurring set of psychodynamics. Were this the case, prediction would be an easier job, involving only one's ability to observe that particular set of dynamics in case material.

My assumption in the examination of the 1959 records was that material relevant to the description of the sexual orientation

*Prior to publication of the symposium proceedings, participants were invited to make additional comments either in regard to Dr Hooker's discussion or test data not previously interpreted.

conflict in 1959 which was not present in 1957. In both, however, he denies any direct masculine competence elements and prefers to see the male hero as indulged and non-work oriented.

It is difficult to imagine what predictions one would make if the facts were not known. In the 1957 records, I now feel that the comparative position of the two cases with regard to sexuality was the same as in 1959. Tom, however, has altered in 1959 to an increasing expressiveness and lost some of his harsh denial of all affect. This change makes me feel more confident about the portrayal of his 1959 sexual orientation made earlier. I would be more hesitant to make such a prediction based on the 1957 records. It is possible that examination of other aspects of the TAT, ignored in this limited approach, would resolve some doubts. As it now stands, however, Tom's behavior would seem to be more reflective of his many binding relationships and distorted by his compelling anxieties than expressive of any basic positive interests. In this case, his overt sexual behavior could readily be expressive of resentments, influenced by sympathetic social contacts not apparent from his TAT, and hence difficult of prediction without more information. Even with these limitations, Tom's unresolved mother relation, his expressed if over-determined interest in female sexuality suggest this as a central area likely to be worked out in action. The passive aloneness he sees in peer males and the hostile attack on adult males suggest this as an area of avoidance.

REFERENCES

1. Henry, W. E. *The Analysis of Fantasy*. New York, Wiley, 1956.
2. Henry, W. E. and Farley, J.: A study in validation of the thematic apperception test. *J. proj. Tech.*, 23:273-277, 1959.
3. Henry, W. E. and Farley, J.: The validity of the thematic apperception test in the study of adolescent personality. *Psych. Monogr.*, 73:No. 17, 1959.

in these same two spheres. His organization is rigid and insufficient for the problem presented and his affect is generally blocked, and is harsh and unforgiving when it is indirectly implied.

Beyond these general points, Dick presents a picture highly similar to his 1959 pictures. The Mother imagery separates mother from son as an interactive force—though if anything he felt more benign toward her in 1957 than in 1959. In both instances, however, he has blocked her off and denies her any real role in his own life. The Father, male adult imagery is again briefly similar to his 1959 record. The father is a negative, undesirable person from whom, however, one can abstract some usable attributes, those of masculine assertion and competence. In 1959, this picture is clearer and the competence elements are more integrated into self than in 1957.

In these two elements of parental imagery, the elapse of time—and possibly other events—has resulted in an increased sense of masculine competence for Dick and enabled him to reduce somewhat, though not forget, his father-hostility. The slightly less benign presentation of the mother in 1959 may be without significance. On the other hand, it may suggest some increasing sense of loss in his ability to establish love relationships of adequate durability.

For Tom this area of parent contact presents a more marked difference than is the case for Dick. While the over all imagery is similar—bound to mother through a paralyzing but ambivalent dependence and bound to father through a crippling hostility—the 1957 records present a picture of affect denial and interpersonal harshness not seen in 1959. By 1959, Tom has begun to concede his emotional involvement and become somewhat more directly expressive.

In the peer areas, Dick presents essentially the same picture as he does subsequently in 1959. This is in essence the neutralizing of female relations, without binding hostility, and the elaboration of male relations as sources of positive reward in both impulse and work arenas. Tom, in 1957, is even more callous and unable to cope with peer female imagery than he is in 1959. If any difference may be noted in his peer male relations, it is in the direction of some opening of affect. This opening presents the image of a possible

defined and controlled objective conditions. Hence, in such theoretical circumstances, objective or structured tests may offer the optimal assessment approach—to gain direct access to sample data of the very criterion we are trying to predict. However, in many, if not most situations, and certainly in clinical situations, these ideal conditions do not obtain, for the individual may show an unknown degree of unreliability in his behavior, underlying motivational factors may change, or varying stresses in the life situation (with their conscious and unconscious symbolic meaning to the individual) may precipitate variable resultants in the overt behavior.

If we keep constantly in the forefront of our thinking the idea that overt behavior is merely the end product resulting from any one of a combination of factors we can begin to appreciate that such predictions are in their essence contingency predictions. And to make contingency predictions we must know the parameters relevant to the prediction problem. Yet it must be clear that ordinarily we have only limited awareness of the nature or ordering of these parameters. Furthermore any single assessment technique is likely to have seriously limited values in providing the array of data needed for such contingency problems.

It is in the light of such general considerations as these that we can evaluate the advantages and limitations of various types of projective assessment techniques. In theory, projective tests offer us the possibility of assessing to some extent both conscious and unconscious determinants of behavior although for good reasons depth psychology (or dynamic or analytic psychology) has stressed the virtues of such procedures for measuring unconscious factors. To the writer it seems axiomatic however, that one cannot fully assess the one without the other for each is part of the whole and each gains meaning in terms of the other. Thus the unconscious meaning of acting out for example can only be understood if we are aware of the types of situational stresses and symbolic meanings for the individual's internal presses which may precipitate acting out. In fact, if we conceive of all overt behavior as the end product of internal homeostatic processes designed to offer the individual maximal adjustment for him at any given moment to external as well as internal stresses we cannot avoid the conclusion that to borrow from a popular song: We can't have one without the

THE REVISED BENDER-GESTALT VISUAL MOTOR TEST

MAX L. HUTT

PART I

The purpose of this paper is twofold: to illustrate the possible uses of some projective techniques in predicting overt behavior; to make explicit some of the assumptions and methodological considerations underlying predicting overt behavior. Since the former problem involves the use of certain assumptions and methods for its success or failure, we shall discuss these before proceeding to an examination of the test data.

The difficulties in predicting overt behavior are legion. Whether the problem is to assess competence in clinical psychology (7), or in psychiatry (3), or whether the problem is to assess specified behavioral traits (8), the paths of both researcher and clinician are laden with difficulties. Even if we assume that the criterion problem (an extremely complex problem in itself) has been solved (5), there are unique difficulties in making the transmutation from projective data to overt behavioral data. It has even been suggested that for the prediction of overt behavior, especially of the more circumscribed kind, the most simple types of objective tests or small samples of work or life history may be the most appropriate means (3, 5) for such methods are more likely to replicate the very behavior one is trying to predict. Nevertheless, the prediction of even simple types of overt behavior from parallel samples of test or life history data has its serious hazards, since the phenotypic data may very well be the end-product of complex and different underlying processes and factors. We may take it as an axiom that when the problem has been defined as that of predicting well-defined and specific simplex behavior in cases of stable and well integrated individuals in life situations that are themselves quite stable, we should attempt to gather test samples of the very same type of data under carefully

These last remarks lead to what I should like to call the development of sequential hypotheses about the patient. They are somewhat like configurational analyses, which I have discussed elsewhere (4, 5), but they are quite dissimilar to actuarial hypotheses although, in the end, they also rely upon actuarial data for their evolution. In sequential analysis we attempt to do a number of things. First, we follow the patient through his successive adaptations and defensive maneuvers with the test problems, hypothesizing quite freely what each successive state of behavior is likely to mean or measure. Thus we form a series of successive hypotheses about the patient, some of which may appear to be paradoxical or even contradictory whereas others may appear to be mutually reinforcing or supplementary. It is best if we can pin each of these hypotheses to actuarial data or at least to subjective norms built up out of one's extended clinical experience. Next we try to reformulate these hypotheses so that we emphasize the contingency nature of the predictions; i.e., we state as explicitly as we can under what conditions each hypothesis has emerged. Then we attempt to empathize with the patient as he successively adjusts to the test situation, making full use of the symbolic response data as well as of our intuitive understanding of the dynamics which led to each successive response. Finally, we attempt to resolve the apparent contradictions in our hypotheses, weight the evidence for each of our formulations, relate the configuration of hypotheses to what we know in general of psychopathology and personality development, and reformulate our predictions on a contingency basis so as to offer the most parsimonious explanation of the individual. We are, then, finally, in a position to indicate the limits and degrees of confidence we can attach to our integrated formulations.

I suggest that the aforementioned capsule summary of sequential hypothesization be done independently for each major source of data about the patient, that is, for each test, for interview data, for observational data, and for life history. These separate formulations will then have to be reconciled and integrated. It is likewise true, as has been demonstrated, that there may be a point of diminishing returns beyond which the inclusion of more data adversely affects the clinician's predictions (1). It is also probably true that clinicians vary in their capacity for utilizing such an approach,

other." And projective tests offer at least clues, and sometimes palpable scores or configurations, of conscious motivations as well as unconscious ones. One might say that, in general, projective tests maximize the variance of unconscious factors whereas objective tests maximize those of conscious factors, but neither relies exclusively upon only one of these.

Hence it is, that we can regard projective tests as offering us, at a given time in the life space of the individual, a variety of leads to both unconscious and conscious factors, the interplay of which in varying proportions, enables us to understand, and hence predict, the ways in which an individual may adapt to defined life situations. Notice that the tests hardly define the life situation, but rather that this is left undefined so that the predictor then has the job of specifying under what circumstances each of a variety of end-product overt behaviors is likely to emerge.

Let us elaborate a bit on the assessment of these two levels of evaluation; unconscious and conscious. It seems that, to the extent that the stimulus is unstructured, or the test problem undefined, and to the extent that the approach to analysis of test data is oblique rather than direct (i.e., analysis of implicit rather than explicit meaning of the response), the test or examiner will be emphasizing unconscious factors. On the other hand, to the extent that the stimulus is structured and the methods of analysis direct (i.e., as in evaluation of manifest content), conscious factors will be maximized.

We can assume that, whatever the clinical task, the patient's methods of work, his concurrent verbalizations, his explanations of his methods and solutions, and the manifest content of his test record will offer leads which are heavily weighted with conscious meaning. If we examine the context in which these occur, we may then have important leads to circumstances in later life which are likely to elicit similar or replicable types of overt behavior. On the other hand, if we simultaneously examine the unconscious configurations out of which such test data and behavior emerge, we can, perhaps gain a better understanding of the internal sources which lead to the overt behavior, and if our analysis has validity, we should therefore be able to improve our predictions.

increase with each successive drawing. (Note, for example, that Tom has drawn 5 of the figures on the first page, and has drawn 4 figures on the second page, using the entire page in each case.) Moreover, although he has utilized space liberally, the spacing of successive figures is appropriate to the size of the reproductions. With this initial information, we are able to support some hypotheses based on Tom's general approach to this problem. These are: he tends to be outgoing, labile and assertive in his approach to a new and relatively unstructured situation, showing no essential evidence of overt anxiety in his test behavior (although we can infer that the increase in size is compensatory for some degree of latent anxiety); he tends to order his world, using external controls (the numbering) to gain some degree of mastery or self-assurance (a sub hypothesis is that he uses the service of compulsive defenses to achieve this end-product); the appropriate, but liberal use of white space suggests that his assertive drives are at least reasonably well socialized.

A second set of general observations may be made, taking note of the relatively heavy line drawings he utilizes, and the generally impulsive or spontaneous (more probably the former) quality of his motor executions. These data reinforce our hypothesis that he is labile and outgoing, and that he tends to act out rather than suppress the discharge of his drives. One can infer that his outgoing and assertive behavior may, likely stimulate counter-assertive behavior in others so that, in turn, he has more apparent external basis for his own assertiveness; hence, if this were so, he would tend to use rationalization to a pronounced degree.

Now, turning to an examination of each of the reproductions, in turn, we note that: in Figure A* (the circle and the square), he reproduces the Gestalt adequately (this will turn out to be generally true of the other figures); he places the figure in a common position on the page for Figure A (slightly left, top portion of the page); enlarges the square in proportion to the circle, markedly increasing its horizontal dimensionality; shows impulsivity in the drawing of the circle (overlap in closure); shows joining difficulty of the square and circle; makes no attempt to correct or erase;

*Tom numbered Figure A as 1, and numbered the succeeding figures from 2 to 9. Thus, his numbering is always one digit higher than the "standardized" numbering.

depending upon their own personality attributes (1), and that types of clinical training and experience may influence the predictive capacity of the clinician who uses this approach (1, 6, 8). Thus we are not minimizing the difficulties and hazards of such an approach. Nevertheless, our own experience and the limited research data we already have, suggest the over-all advantages to the clinician (in contrast to the actuarial assessor) which sequential hypothesization offers.

PART II

Now we shall proceed to elaborate some of these methodological considerations with a highly restricted sample of the Bender-Gestalt projective test data. We were forced to this decision by the realistic limitations that a symposium of this kind imposes. We were given a wealth of data: the original Bender-Gestalt reproductions of both identical twins, obtained some two years ago; the recall of the Bender figures obtained directly after the test was administered, standard Bender-Gestalt reproductions of both twins after two years; modifications of these figures according to suggestions advanced by Hutt (4); and associations to both standard and modified reproductions. In addition we had available the Draw a Person record of the twins at each of the two periods.

It was thought best, for purposes of this symposium, to concentrate our examination on the original Bender reproductions of one of the twins who had been in psychoanalytic treatment. It is hoped that the gain in somewhat greater analysis of method and example which this makes possible, will offset the loss due to the severe restrictions in the data which are being utilized. If our predictions lose something by virtue of the small sample, the clarification of the methodology may be ample compensation.

We are told that Tom, one of a pair of identical twins, is heterosexual and is 29 years of age. We have no information, unfortunately, on his methods of work during the original Bender test in 1957. Taking a general over-view of Tom's original Bender reproductions, we note that he has arranged the figures on two successive pages in correct sequence, and further that he has spontaneously numbered each of the figures from 1 to 9. The figures are considerably enlarged in size and this enlargement tends to

this time the dots are heavily filled in (in contrast to Figure 1). Thus, in an unclosed figure, Tom strives even harder to compensate for the loss of control, asserts himself even more strongly in stressing his need for dependent, interpersonal relations, but at the same time becomes more openly aggressive in his behavior.

Figure 4 gives us some additional clues to the underlying sources of Tom's problems and the residual behavior which he manifests. The unbalanced feature of this figure (with the curve at a 45 degree rotation from the horizontal) is relatively more upsetting to anxious, non-spontaneous adults than to others. In his reproduction, Tom makes two adaptations. First, he draws the curve in such a manner that the acuteness of the angle of the base and the upper curve is reduced. Second, he markedly increases the size of the curve, both absolutely and in relation to the open square. In addition, there is excessive, slightly fragmented looping on the ends of the curve. Further, one of the vertical sides of the open square is made longer and more jaggedly than the other. The open square is slightly larger than the stimulus but reduced in proportion to the curved figure. The typical signs of rapid, impulsive work habits are clearly noticeable. Our inferences are, respectively: he has an excessive need for control and conformity; he expresses hostile drives more openly in emotionally-tinged situations. He is, once again, showing his fearfulness of authority figures. Possibly, he has a more pronounced feminine than masculine identification.

Tom's first real indication of fairly severe inner tension and conflict seems to be revealed on Figure 5. Here some very striking modifications appear in his reproduction. In the first place, the hallmark of poorly controlled, impulsive drives appears: his figure collides with the upper edge of the page, and the vertical axis of the figure is thereby foreshortened. Yet, he makes no attempt to correct the figure or re draw it. He decreases the number of dots in both parts of the figure, but fills each dot in very heavily. Again, let us remind ourselves that this is an open, non-continuous figure (less structured). We cannot be sure of the possible sources of this overt, obvious breakdown in controls, but the following suggest themselves. Possibly, the accumulation of frustrations involved in the test procedure has begun to have its effect. More important, the unstructuredness of the figure creates special problems for an

slightly flattens the circle, the net effect of which is to increase the total lateral or horizontal dimensionality of the figure. From each of these observations, in turn, we are led to the following hypotheses: he has good contact with reality; and has reasonably good ego cathexes; he tends to be conventional rather than unconventional in his social orientation; he is making considerable effort to establish or maintain interpersonal relationships (showing a need for such relationships); he tends to be fearful in authority situations; impulsivity, as a character trait, must be fairly marked; he is dissatisfied with the nature of his interpersonal relationships, and more specifically is concerned over his sexual adequacy; affect is outgoing but may lack depth and integrated qualities in his total behavior.

Having exemplified some of the methods of inducing hypotheses with Figure A, I shall now, due to limitations of time in dealing with all of the data, move still more rapidly through the remaining figures. Figure 1 does not have much to offer us. It is correctly reproduced, although there is some tendency toward paired grouping of the dots. The dots are made fairly heavily, but neatly (no sketching). These data support the hypotheses that: he is in reasonably good contact with reality; he has good energy capacity which he expends in a centrifugal manner. The increase in the laterality of this reproduction emphasizes Tom's need to relate to others.

Figure 2 shows the following features: initially correct angulation of the first column of figures with a constantly increasing egocentric orientation of the successive columns (as if Tom were the pivot around which the columns were oriented); correct number of columns (if there were 11 columns in the original stimulus); circles drawn as good loops, but with some impulsivity and some closure difficulty. Inferences: good perceptual accuracy, but a strong narcissistic tendency and generally forceful but impulsive behavior; some fearfulness in interpersonal relationships. The egocentric trend combined with the previously noted labile and outgoing qualities indicate that, as a second order inference, he is insecure but compensates rather well for his latent anxiety.

On Figure 3 we note a radical, lateral and over-all expansion in the size of the figure but the Gestalt is preserved. However,

motor incoordination and poor control; joining and closure difficulty are very noticeable; he has great difficulty with the internal diamond, doing some re-drawings for the first time, and making many false motor movements in the process. Despite the history of heterosexual adjustment, which we are given, this analyst would question Tom's heterosexual adjustment. This reproduction is indicative of fairly marked conflict over homosexual tendencies. This problem probably lies at the core of his difficulties and insecurities in interpersonal relationships: he is really unsure of his sexual identity, and overcompensates with apparent masculine behavior to mask this problem from himself. The ambivalent quality of the internal diamond as a sexual symbol makes Tom's usual coping methods less adequate on this figure, and hence the redrawing and obvious uncertainties on this part of the reproduction. One can also hypothesize that, if Tom is egocentric in orientation as we have suggested, problems centering around masturbation as a tension reducer, are also present.

If time were to permit, it would be instructive to examine, next, Tom's record of recall of the Bender figures, given under Fred Brown's suggested procedure for recall (some 45-60 seconds after removing the original cards and reproductions), and to derive independent hypotheses from these data before attempting to integrate the hypotheses and to develop our inferences concerning overt behavior. Instead, we shall proceed to this latter step on the basis of what we already have in the way of observations of test behavior and deduced hypotheses.

Our analysis has yielded several hypotheses concerning underlying source traits and several hypotheses concerning explicit and simplex examples of overt behavior. We have begun to understand Tom as an outgoing, labile, assertive individual with strong, over-compensatory characteristics. We have seen that he ordinarily holds on to an adequate perception of reality, but that he shows considerable regression (neurotic in character) under specified conditions—namely, cumulative stress and more specifically, emotional types of trauma. We have seen certain features of his attempts at control through compulsive conformity and external props. From these and other types of evidence we must try to understand why

individual attempting to assert control through acting out and overcompensation. Other possibilities are, of course, likely to account for these phenomena. In any case, planning and anticipation are now shown to be inadequate. He is not the comfortable, confident figure he tries to present to the world. The tendency to edging of his figures, previously evident but not commented upon, is now reinforced by placement of the figure almost in the extreme, left-upper corner position. Strong compensatory efforts to ward off feelings of inadequacy and frustration are evident in the excessive effort devoted to filling in the very heavy dots.

On Figure 6, an extreme expansion in size, in both lateral and vertical planes, is noted. The size is more than doubled in both dimensions. The curves are flattened in the horizontal plane, and made irregularly and rectangularly in the vertical plane. The angulation of the figure is generally preserved, but the figure is rotated slightly in a counter-clockwise fashion. The loops, particularly at the ends of the vertical curve, are reversed. The whole figure appears to have been drawn rapidly and no revisions or corrections attempted. Inferences: acting out tendencies, under conditions of emotional stimulation are very pronounced; egocentrism is a central feature of the personality; contact with reality is maintained, and social conformity is exercised despite marked tendencies toward impulsivity; the extroverted, non self-critical features of the personality are highlighted. Aggressive tendencies, formerly kept under more adequate control, now assert themselves boldly.

Figure 7 shows the following features: simplification of the Gestalt (in that the two figures are made to overlap in the vertical segment of the vertical figure); closure difficulty; irregularity in line movement and line quality. We can now hypothesize that under the impact of progressive traumata there is a regressive tendency; despite initial tendencies to apparent confidence in interpersonal behavior, there is considerable conflict and fearfulness in such situations; underneath the armor of self-confidence there is considerable latent hostility.

The last figure, Figure 8, is striking and unique in several respects. Despite his perceptual maturity, as revealed in previous drawings, he has considerable difficulty with this figure. The left-hand vertex of the lateral hexagon shows considerable evidence of

First, we can predict that Tom will function at least reasonably well in many, if not most, situations. He has considerable energy available for daily tasks, and he gives the superficial impression of a likeable, fairly stable and assertive person. He is usually orderly and controlled enough not to be gauche, and to be able to conform to social situations fairly well. His emotional behavior is also a social asset, in that his outgoing and apparently labile, responsive qualities make him rather attractive to others. He would particularly appeal to masculine-oriented women who would not see him as a threat to their own masculine strivings. He would generally tend to be expansive in mood and rarely reveal depressive reactions. He would not easily confide to others, however, his own gnawing feelings of inadequacy, nor would he be likely to reveal to others, much less to himself, his fearfulness of authority figures. He would be able to establish superficial relationships quite readily, and he would be a joiner and an active participant, but he would not develop intense relationships with anyone easily, if at all. Not only would he be assertive, however, but he would be self-assertive, whenever the situation permitted. One would also predict there would be apparently inexplicable periods of indecision, work reduction, and even more overt disorganization when he was unable to escape from repetitive emotional frustration. His own self-doubts and feelings of uncertainty would finally lead him to seek some form of therapeutic help.

In closing, I cannot forego a very brief comparison of Tom's original Bender reproductions with those he completed after two years of psychoanalytic treatment. I do not wish to comment on the evidence that the Bender gives us concerning the degree of improvement concurrent with this effort, for that would be presumptuous without considerable analysis of many other types of data, but I do wish to point up certain differences in the two sets of reproductions, as well as certain similarities.

First, the second set of reproductions, after some two years, were considerably reduced in size and the total amount of space utilized for the reproductions was reduced almost by one-half. Much more cohesion is also revealed in several other aspects of the drawings, especially on Figures 3 and 7. There is also noticeable success in solving the problem of overlapping of Figure 7, and

it is that he functions, at least on this test, in the unique ways that he does.

The core of his difficulties may be hypothesized to be in the problem of his sexual identity. Our inference was that he had dealt with the problem of latent homosexual tendencies by various mastery and compensatory techniques. Together with the hypothesis that he is egocentric but centrifugal in his orientation, we can point to an unsuccessfully resolved and repressed Oedipal problem with the likelihood that he was over-protected by a mother with whom he tends to identify. He had learned to perceive himself as more comfortable in a feminine role, but conflict resulting from the assumption of this role led him to assume more outgoing, assertive and "masculine" behaviors as a more secure mode of adjustment. Nevertheless, the underlying conflict remained, and more compensatory mechanisms were necessary to maintain a heterosexual way of life. On the other hand, the heterosexual way of life had its own social rewards, and probably helped to differentiate him from his identical twin. Thus, the masculine ways of behaving were reinforced and, in turn, these ways produced secondary gratification. Underneath, infantile sexuality remained, and fear of really close interpersonal relationships was fostered. Thus his self-perception became ever more obtuse and he had to learn to bolster his own sense of self by more outgoing, masculine behavior. In the process, spontaneous affective response and capacity for mature fantasy behavior were diminished. This, then is the neurotic character structure which is suggested by our data. Note, that we are giving no attention to physical history and other biological factors that may be relevant and important in attempting to understand Tom. Were these available we could then proceed to correct and supplement our present formulation.

Now, assuming our basic analysis is substantially correct, what can we infer about overt behavior? Here, we are severely limited by not knowing the conditions of the testing and by not having observational data concerning Tom's methods of work, his verbalizations and the like. Nor does this accounting of short comings consider other types of life history and test data. However, given these limitations, what can we now infer—with, of course, lowered limits of confidence—concerning such predictions?

7. Kelly, E. L. and Fiske, D. W.: *The Prediction of Performance in Clinical Psychology*. Ann Arbor, Univ. of Michigan Press, 1951.
8. Meehl, P. E.: *Clinical versus Statistical Prediction*. Minneapolis, Univ. of Minnesota Press, 1954.

ADDENDUM*

Since we are offered the opportunity of extending the analysis of the Bender-Gestalt material, we shall now proceed, in order, to deal with the additional test data available for Tom: his recall of the Bender stimuli (in 1957) and the Bender-Gestalt retest in 1959, including the modifications and associations obtained at that time. We do not have any detailed observations by the examiner on Tom's methods of work, and so are unable to utilize this type of data in the evaluation.

The recall of the original Bender figures, some 45 to 60 seconds after removing the original cards and drawings, is our first concern. In analyzing this material, we shall first make two general assumptions: (1) Material which has had a traumatic impact upon the subject will tend either to be repressed (if it has been disturbing), or to be reproduced first, or early, in the recall sequence, (if it is unpleasant but the subject feels he can discharge some of his anxiety in "working it through"). (2) The subject will tend to exaggerate his previous distortions (or maintain the same degree of distortion) for those figures which were moderately to severely disturbing, while he will make compensatory adjustments for those previously distorted figures (and the related psychological phenomena) on which his performance was marginal. A corollary to these assumptions is that to the extent to which the subject suffers from more severe psychopathology, he will make more errors in recall (fail to retain the figures) and make more serious distortions than on the original reproductions. It is also assumed that the total amount of retention is positively correlated with the subject's level of general intelligence. Thus, analysis of the recall material enables us to confirm or reject inferences previously established for the

*Prior to publication of the symposium proceedings, participants were invited to make additional comments either in regard to Dr. Hooker's discussion or test data not previously interpreted.

there is no real evidence of simplification. Much more control and even constriction appear in the second record. There is also some evidence of spontaneity in the arrangement of the figures; they are still orderly, but they are adapted to the space available on the page rather than to compulsive ritual; nor are the figures numbered. On the other hand, some of the exaggeration of figures in the lateral or horizontal plane remains. Difficulty with curved figures is still a noticeable feature. The angulation problem on Figure 2 also remains. There are definite signs of considerable internal tension, but fewer signs of acting out. Tom is less expansive and labile, but more tense as well as more inner-directed. Most strikingly, the difficulty with the problem of identity on Figure 8 is markedly reduced, although residuals still appear to remain. Lest it be inferred that I am attempting to evaluate these findings as a reflection of the psychoanalysis, per se, let me emphasize that I am only pointing up the fact that certain marked changes have occurred, while, at the same time, certain striking constancies persist.

REFERENCES

1. Daily, C. A.: Some factors influencing the accuracy of intuitive understanding. Unpublished doctor's dissertation, Univ. of Michigan, 1950.
2. Goldberg, L.: The effectiveness of clinicians' judgments: the diagnosis of organic brain damage from the Bender-Gestalt test. *J. consult Psychol.*, 23:25-33, 1959.
3. Holt, R. R. and Luborsky, L.: *Personality Patterns of Psychiatrists*. New York, Basic Books, 1958.
4. Hutt, M. L.: Revised Bender Visual Motor Gestalt test. In A. Weider (Ed.), *Contributions Toward Medical Psychology*. New York, Ronald Press, 1950.
5. Hutt, M. L.: Actuarial and clinical approaches to psychodiagnosis *Psychol. Reports*, 2:413-419, 1956.
6. Hutt, M. L.: The psychodiagnostic test battery: Use of the test battery for psychodiagnostic appraisal. In D. Brower and L. E. Abt (Eds.), *Progress in Clinical Psychology*, Vol. III. New York, Grune & Stratton, 1958.

involved. Figures A and 6 contain curved lines, and we have already inferred that Tom tends to behave in a labile, outgoing fashion in situations which are clearly seen by him to be affectively laden. Since curved lines commonly evoke reactions as if they were such situations, Tom's tendencies toward such reactions are thereby reinforced when he meets the recall task which these figures present. Figure 1 is an "open" figure, and is the one that is reproduced last in his recall series. Increase in size may thus be accounted for as a terminal response to a relatively simple situation in which he can act out his characteristic, labile tendencies, and thus remove himself from the test situation.

Returning, now, to a more detailed consideration of the various figures, we must note, first, that Figures 3 and 4 have not been recalled. In these figures, Tom first revealed, in the Standard Administration, some aspects of his underlying problem: confusion concerning his sexual role. The figures must be related, in Tom's unconscious, since both provoke real difficulties centering around interpersonal problems. Figure 4, moreover, not only followed Figure 3 in the original presentation, and thus added cumulatively to the stress which was provoked, but showed considerable distortion because of feminine qualities of the curved portion. The total figure thus was indicative of severe stress reaction in the face of an authority symbol (the open square), counterbalanced by a tangential feminine symbol (representing the breast?). We can therefore hypothesize (given both the above analysis and the failure of recall for these figures), first, that these figures represent a severe threat to Tom, and second, that the temporary amnesia for the recall was provoked by his difficulty in facing and dealing with his severe conflict over his sexual role. He "meets" this situation with characteristic hysterical, stylistic features: by avoiding it!

We have already made some comment about Figure 5. We can now add, that the repetition compulsion evident on this second collision (with the edge) tendency is indicative of Tom's habitual impulsive behavior. Perhaps the curve again represents a feminine symbol, and the secant represents a phallic symbol. The "openness" of the figure produces, for Tom, a reduction (again) in the number of dots, and Tom's total reaction reveals a breakdown in

reproductions obtained on the Standard Method, and offers additional sources of data concerning other aspects of the subject's performance and personality characteristics.

On the recall material, Tom has again organized his reproductions in the same expansive style he used previously (using two pages for the seven drawings), he has again placed the figures in regular sequence on the pages, he has not made excessive use of the margin, and he has again shown the same collision tendency on Figure 5. Thus, we have confirmatory evidence that Tom's personality, as revealed on this test, is outgoing, labile, and assertive, and reveals no prominent evidence of overt anxiety. Compulsive defenses may again be inferred. The collision tendency reveals some defect in anticipatory planning—a tendency which appears only under a specified condition (see below), when ego functions are markedly disturbed temporarily. Although the evidence concerning his general approach is clear, there are a number of significant exceptions, and we shall examine these next.

Figure 7 is now reproduced in considerably smaller space, while Figures A, 1, and 6 are enlarged. Figure 7 is a closed, overlapping figure, and commonly evokes aggressive impulses and sexual conflict (as the prototype of sexual interactions). On this figure, Tom is apparently trying to gain some measure of control by reducing its size. In this he is successful, for the line quality is improved and closure difficulty is reduced. At the same time, he exaggerates the angle of intersection of the two parts of the figure, he simplifies the overlapping problem by having the point of intersection occur at an apex of the vertical figure, he increases the width of the vertical figure (thus revealing strong feminine identification), and he shows some difficulty with line quality in that one of the vertical lines is curved. We derive mixed inferences from these data. Tom shows adaptive potential (a good prognostic sign for psychotherapy) but reveals, again, the difficulty he is having with the problem of sexual identity. The problem of assuming an adequate masculine role in sexual intercourse is a difficult one for him.

We may now ask, "Why does Tom increase the size of Figures A, 1, and 6?" It is difficult to be sure of the factors that may be

taneously or deeply. We can infer that he uses both intellectualization and isolation as prominent defense mechanisms.

We have already commented in some detail on Figure 7. It is only necessary to add that the evidence, adduced by this reproduction and previously commented upon, seems to hold up well in the light of the other evidence provided by the previous figures.

Figure 8 shows a remarkable recovery in the reproduction of the internal diamond. This time, Tom had little difficulty with this portion of the figure, and not only shows no repetitive attempts at its mastery, but solves the joining and closure problems fairly well. We can infer that, if the internal diamond represents a feminine symbol, as we believe, and despite Tom's inadequate heterosexual adjustment, his homosexual difficulties are not the basic, primary aspects of his problem, even though latent conflicts concerning homosexual impulses are undeniably present. The exaggerated phallic endings of the external hexagon once again reveal his compensatory attempts to act out the role of the adequate male. Once again, the improvement in the over all reproductions is a good prognostic sign of Tom's potential for effective use of psychotherapy.

Thus, taken all in all, the recall material suggests no basic contradictions to the inferences we developed from the analysis of the reproductions in the Standard Procedure. Most importantly, the basic conclusions are reinforced. Tom is seen as an individual with both hysterical and compulsive features in his personality, and with a core problem in his sexual identification. The personality shows many infantile characteristics and is characteristically both labile and egocentric. It is more clear now that an unresolved Oedipal problem is central to his difficulties, and that although he shows both oral and anal features in the personality, his primary regression is to the Oedipal level. It is now more likely that, if uncovering therapy is attempted, the latent anxiety will become much more openly manifest, and that Tom will have to undergo the experiencing of much of his previously warded-off anxiety. He is likely to become overtly more disturbed before he can resolve his basic problems. At the same time, the recall data suggest that he has reasonably good potential for uncovering psychotherapy.

that aspect of ego functioning which involves planning and anticipation. The figure is placed near the corner of the page. Moreover, it is the first one reproduced in recall, thus suggesting the need for rapid discharge of the tensions which are elicited. The fact that it is recalled rather than repressed augurs well Tom's ability to deal with this problem under the supportive conditions of psychotherapy; The distortions suggest the nature of the severe underlying and largely unconscious problems.

Figure A, which follows next, has an additional noteworthy feature, not previously commented on. This time, the circle is enlarged in the horizontal dimension (making it into an ellipse), and the diamond is reduced in the same axis. The joining and closure difficulty, present in the original reproduction, persists. Now, in the relatively free situation of recall, without the reality pressure of the original stimulus constantly in view, Tom exaggerates the female symbol. Thus, he reasserts his own feminine orientation, and at the same time reveals his difficulty in interpersonal situations.

Figure 2 again reveals the egocentric orientation of the successive columns of circles, the same impulsivity, and the same closure problem. Again, he produces eleven columns of circles. This type of attention to detail is indicative of the compulsive features of his personality. We are led to believe that he compensates relatively well for his latent anxiety, but that he is basically an egocentric, although labile, individual.

In figure 6, the sinusoidal curves, we can more clearly infer the nature of Tom's affective behavior. The horizontal curve has only three large waves, while the intersecting curve (more or less in the vertical plane) has more controlled and more pronounced waves. Aggressive acting out, under a fair degree of control, and conventional affective behavior in authority situations may be hypothesized. The intersection of the curves is inappropriate, possibly indicating Tom's superficiality in his interpersonal relations. We are led to believe that Tom behaves as if he were experiencing the appropriate emotions, role playing as it were, and makes a conscientious effort to do so when confronted by people whom he considers authoritative, but is unable to experience affect sponta-

indicative, as is true of the whole set of 1959 drawings, of the increased cohesion in Tom's personality—of his increased inner tension.

Figure 1 is reproduced correctly, but there is no conspicuous, heavy filling-in of the dots. The dots tend to be arranged in pairs. The marked increase in the lateral dimension which was noted in the original reproductions is absent. Thus, we would infer that Tom is able to deal more simply and realistically with the problem presented by this figure, that he is in good contact with reality, and that his excessive need to relate has been reduced.

The most striking change in Figure 2 is the absence of the egocentric orientation of the successive columns of circles. Other features, aside from the reduction in the lateral dimension of the whole figure (which holds true for all of the figures), are essentially the same as they were previously. Tom's first columns are placed at approximately the correct degree of angulation, but the following columns are drawn with reduced angulation. We would interpret these findings as indicating that he is less self-centered, but is still fearful of emotionally charged situations. His internal controls are functioning better, he is denying his impulses less, but is paying the price in somewhat increased, overt anxiety.

Figure 3 is better proportioned in size in relation to the stimulus, but is markedly cohesive. The drawing reveals the impulsive use of circles, instead of dots, on at least two and possibly more of the details. Again, we have evidence of some acting out and of inner tension.

On Figure 4, the curved portion is correctly oriented in relation to the open square (which was not the case in 1957), but the size of the curve is still exaggerated somewhat, and the loops are still exaggerated, also, but are no longer fragmented. The open square shows relatively little distortion. The most significant change, that of the relationship of curve to open square, is indicative of a change in his sexual identification. He is much more accepting of a masculine role as his true identity, although this problem has still not been resolved.

On Figure 5, which caused Tom great difficulty on both the Standard and Recall portions of the 1957 series, his present per-

He is reasonably well motivated for therapy, some of the conflictual material is close to preconscious awareness, and ego integration is reasonably well intact. We can infer that his heterosexual behavior is a defense against homosexual conflict, but we also have some evidence that his homosexual problem is not necessarily the primary one; rather, the problem of never having resolved his Oedipal problem may have led to the activation of a homosexual orientation, and this, in turn, was defended against by the facade of heterosexuality. We can now more fully understand why it is likely that Tom would gravitate toward a non-threatening, masculine but permissive, type of woman—one who could take a strong, assertive, mothering orientation toward Tom, but who would not confront him with his own inadequacies in his masculine role playing.

Now let us turn to the follow-up data, obtained some two years later.

In contrast with the earlier test, the present reproductions occupy only slightly more than one page, and, in general, are constricted in size. Moreover, although the sequence is still orderly, there is more appropriate use of the space available on the page, since some of the drawings are placed alongside each other in more spontaneous fashion. Thus, we can infer that Tom is in good contact with reality, is somewhat more spontaneous, but is also experiencing more subjective tension. More than this, Tom now shows less lability in his general style of drawing and far less self-assertiveness. We also note that the figures are not numbered, as they were in the 1957 test, so we have some evidence that he has less need of external props or controls than he formerly did.

Figure A is placed quite close to the upper, left corner of the page, showing more overt anxiety in Tom's approach to the test situation. The closure and overlapping difficulties, noted previously, persist in this drawing—indicative of persistent difficulty in interpersonal situations (but the nature of this problem has changed, as we shall see shortly). Significantly, the compensatory increase in the size of the diamond is no longer present. Thus, Tom's need to create a "masculine impression" is not so marked. The appropriate and smaller size, in general, of the drawings is

has now defined his problem in this area much more accurately and has begun to cope with it.

Let us turn, now, to the Modification portion of the record and the Associations to the Standard and Modification portions, before we sum up the findings on the retest.

Following the procedure suggested by Hutt (4), Tom was given Figures A, 2, 4, 6, 7, and 8 again, being asked this time to modify the figures in any ways he wished so as to make them more pleasing to him. After this, he was asked to give his associations to both the original stimuli and his modifications. The rationale for these procedures is discussed in the cited reference.

On Figure A, Tom felt, as he tells us in his associations, that he had to do something with the "imbalance" or "sliding off" qualities of the stimulus. Thus, in his modification he encloses the two parts of the figure in a frame, and thereby tells us of his need to maintain some sort of control in this, for him, symbolic representation of the relationship between male and female. His comment that his drawing represents an "abstract painting" may be interpreted to mean he is using intellectualization as a defense against this type of conflictual situation. Thus we can see in operation, as we commented in our original A. P. A. paper, impulses which are at both levels of awareness—the conscious and unconscious. We can therefore suggest that Tom is now consciously aware of his uncomfortable feelings—his inner tension—centering around the conflict in sexual roles, but is not fully aware of the underlying bases for this conflict. We should also comment on the fact that, although Tom has turned the paper on its horizontal axis for all of the drawings—an indication, in his case, of the more subtle handling of his assertive drives—he persists in exaggerating the vertical dimension by drawing Figure A in that orientation. Moreover, he places the circle above the diamond—an indication of his perception of the more dominant role he assigns to females. The "frame" he utilizes for his drawing, a curve with phallic properties, underlines his ongoing, and unresolved attempts at solving his Oedipal dilemma. In short, taking all of the evidence on this drawing, we can say that Tom has begun to define his problem, has somewhat more appropriate means of dealing with it, but has not worked through to a full resolution of it.

formance shows notable change. There is no longer any hint of a collision tendency, he does not utilize heavy, filled-in dots (except for one dot), the phallic portion of the figure (the secant) now has greater length (6 instead of the 4 dots on the original reproduction), but the whole figure appears to have been done rapidly. The use of dashes in place of the dots should be noted. Although, therefore, this figure still causes Tom difficulty, he handles it much better. He responds in impulsive fashion, getting out of the situation quickly, but he does not lose control to the extent he formerly did. The situation makes him tense, but he does not have to fight intense feelings of inadequacy.

Figure 6 causes Tom real difficulty. The markedly variable amplitude of the curves, the jagged line quality, the flattening of most of the waves, and the compensatory reversal of direction of the vertical curve at the point of intersection, are noteworthy features. We have to infer that Tom is not only tense, but is very fearful in interpersonal situations in which effective elements are prominent. Thus, we have to modify our previous inference that he is doing quite as well as we would have believed in interpersonal situations. He still shows impulsivity, but egocentrism is far less marked, and he is able to relate better.

He shows considerable improvement in solving the problem which Figure 7 presents. He not only succeeds in solving the problem of overlapping fairly well, but there is no simplification of the figures, and the left hand figure is now the exaggerated one. Closure difficulty and poor line quality are, however, conspicuous. Thus, we infer that Tom is attempting to resolve his problem of sexual identity, is progressing, but has still not reached success. He is quite anxious and is unable to relate entirely effectively and not without ever-present conflict.

The inference that Tom has not entirely resolved his problem of sexual identity is reinforced on Figure 8, which reveals that although he has done remarkably well on the internal diamond portion of the figure (in contrast to his 1957 performance), there are strong indications of closure difficulty, and exaggeration of the apex portions of the external portion of the hexagon. One might infer that residuals of his homosexual conflict persist, but that he

Figure 2 presents us with a wealth of fascinating data, and we shall select the most prominent features to comment on. Tom's association to the original stimulus that "it's just a pattern and isn't going anywhere", may indicate that he uses denial to avoid the painful reaction which this stimulus evokes. We noted that his response in the Standard Method was indicative of tension in an emotionally charged situation. Now, in his modification, he enlarges the figure in the horizontal plane, and he associates an "anteater" with "wheels" that "could move pretty fast if it wanted to." Thus, we can infer that he is still bothered by interpersonal problems, that he still uses avoidance techniques as a defense pattern, and that he has oral incorporative interests. We see more clearly, from this, Tom's basic egocentric orientation, his passivity, and his oral aggression as primary features of his personality. At the same time, we can infer that because of his originality and relative freedom with this material these trends are being integrated into his more mature personality and that his regression, while it contains some oral features, has not stayed at the oral level but has moved beyond it.

Figure 4 reveals that Tom's previous exaggeration of the curved portion of the figure is not "accidental", for here for the fourth time in his record this exaggeration occurs once again. But here, we see the male symbol, represented as a square, as having attained a superior position (being on top), although precariously balanced, and, according to his association, "It didn't seem to be sliding down a hill so I put an arrow there to indicate where it was going to go if someone gave it a little push." Tom seems to be telling us that his status as a male is not a stable one, that stress ("a little push") would probably cause it to slide, and that his orientation is still primarily a passive one. The sexual-organic quality of the association (especially the "sliding") may be indicative of Tom's need for passive sexual gratification.

On his modification of Figure 6, Tom attempts to solve the difficult problem, for him, which an emotionally charged interpersonal situation presents. He deals straightforwardly with this problem by simplifying the problem as two straight, but intersecting lines. Thus, the problem of intersection is met head-on, and

appropriate, assertive (aggressive) behavior is being used to deal with this situation. He tells us, in his association, that he was dissatisfied with the "wiggly" qualities of the lines, and he defines the problem as one of "crossroads." Tom, therefore, seems to be aware of this problem at a conscious level; i.e., he is able to define it. Moreover, he is able to offer a solution, even though aggression may be utilized too boldly.

He is unable to offer any meaningful association to the original stimulus of Figure 7, but in his modification, he separates the two parts of the figure (a common solution), makes them into "ballistic missiles," but finally, because he thinks his drawings look "too primitive," calls them "firecrackers." He seems to be trying to deal aggressively, again, with the problem of male sexuality, but still feels childlike, and he is fearful of his sexual-aggressive impulses as being too primitive, i.e., too dangerous and explosive. The remnants of his pathological identification with his mother may, thus, be inferred to be present, but he is attempting to free himself from this dilemma. That he has not yet succeeded, now seems to be abundantly clear.

Tom's continuing problem with his sexual identity may be seen even more clearly on Figure 8, and the aspects of this problem which are present in closure derivatives are even more clearly pointed up. He tells us quite directly that the internal diamond in the original stimulus "didn't make sense." Then, in his modification, he strikingly reveals the repetitive feature of this central aspect of his neurosis, by "doodling" all over the sheet in making some seven diamonds—some inside the larger figure and some spilling out around it. A prominent feature of his association to the modification is that part of the association which suggests his feeling tone in connection with it: "This looks like a mess . . ." and ". . . it's an artistic failure." He not only interprets the diamond as being a square but he sees the whole drawing as "a parquet floor." If, as we have suggested, the internal diamond represents a sexual (and more specifically a vaginal) symbol, we can infer that Tom is not yet able to deal with this problem directly. He is threatened, and indeed is almost overwhelmed, by the impact of this symbol upon him, and he tries to work the problem out by

repeating the symbol and by placing it within and outside the larger figure. His solution of the "parquet floor" may have a great many meanings, but one that is very probable is the common associative meaning of floor: something that is stable and that one walks on. This seems to be Tom's meaning (*vide* his previous associations of "mess" and his previous expressed needs for an increased and more stable image of himself). The aggressive qualities of this solution should not be overlooked.

The over-all impression from this total retest procedure includes, therefore, a number of features. The most important general impression is that Tom has made very considerable change since the previous test, some two years ago. The general direction of this change is a progressive one, and in this he reveals that he has defined or begun to define his problems much more adequately, he is much more consciously aware of the general nature of his conflicts.

At the same time, he is much more overtly anxious about them. He has also begun to cathect more adequately. The ego-centric, passive, and oral-anal features of the personality have become more clearly discernible. However, he has also become more spontaneous and more appropriately self-assertive. His sexual identity is still a confusing one for him. One can infer that the previously inferred latent homosexuality, which overlay the manifest heterosexuality, was itself a defense against Oedipal wishes of an aggressive nature. The compulsive defenses have yielded, permitting much more of the creative and spontaneous features of the personality to begin to function. It is difficult to say whether Tom gets along better or worse in the social world, but in terms of his inner balance, he is much more mature. There still remains a great deal of work for Tom to do before he can function comfortably with an essentially conflict-free self percept.

We should like to add one final word. All of the above detailed analysis has been pointed up in terms of its didactic features and of the complex predictive problems. The reader will undoubtedly understand, however, that we have not always indicated the several steps from the data to the inferences and the predictions. For this we hope we will be forgiven in terms of the limitations which a presentation such as this imposes. Although much of the inferen-

tial analysis rests heavily upon the accumulative knowledge that has been acquired concerning both psychopathology and psychotherapy in general, a considerable portion is based specifically upon clinical and research experience with the Bender Gestalt, and upon the Revised Bender Gestalt, in particular. That a great deal of further research is still urgently needed to support and extend the whole diagnostic problem goes without saying.

THE RORSCHACH TEST

ZYGMUNT A. PIOTROWSKI, PH.D.

Our purpose today is to describe definite and constant rules for inferring overt behavior from projective personality test data. Few would contest the statement known as the principle of interdependence of components, that every projective test component qualifies all others in some manner and degree. The trouble with this principle is that it is very difficult to apply. Moreover, it has not yet been completely worked out in all the necessary details for any projective test, including the Rorschach. We must consequently try something easier though less adequate. In the step by step analysis of the Rorschach records which will be illustrated with Tom's and Dick's test findings, I shall follow the rules of interpretation formulated in my "Perceptanalysis: A Fundamentally Reworked, Expanded, and Systematized Rorschach Method" (1).

As a first step in making our task manageable we might differentiate between indicators of potential behavior and indicators of actual behavior. All of us agree that conscious suppression and unconscious repression are universal human traits and that therefore some potential action tendencies are not fully or directly acted out. It is obvious that we must also consider the independent criterion against which we validate our test conclusions. Even when various projective tests give the same information, the rules of extracting that information from raw test data differ from test to test because each test has unique features, resulting from their unique test stimuli. Consequently, the degree of ease and validity with which information regarding certain specific behavior (especially overt behavior) is inferred does and must differ from one personality test to another.

Limiting ourselves to the Rorschach test, let us identify the most important indicators of potential behavior, i.e., of those action tendencies which determine the subject's role in interhuman relations. The chromatic color responses are among these indicators

because they measure desires to associate with, or dissociate from, others with the intent of a voluntary or forcible continuance or discontinuance of exchange of pleasures and/or pains. In other words, the color responses indicate the degree and quality of being attracted to, or repelled by, others. If an individual produces no color responses, we assume that he is emotionally flat or indifferent. Both Tom and Dick have a high ΣC , 6.5 and 6.0 respectively. They are far from being apathetic. Both brothers are emotionally responsive. At the moment we are speaking only of how strongly they feel, and not of the overt actions which are prompted by their feelings.

In addition to the ΣC we can use the ratio of ΣC (Positive) to ΣC (Negative). We define positive color responses as indicators of desires to associate with others for the purpose of sharing pleasurable experiences with them, and we define negative color responses as indicators of desires to sever emotional relations with others with the purpose of ending unpleasant interhuman relations. The twins differ in their ratios of positive ΣC to negative ΣC (in their first Rorschach records). In the case of Tom the ratio is 4.5 to 2.0, while in Dick's case it is 5 to 1. We would conclude that Tom feels emotionally uncomfortable and fearful when stimulated by others more frequently or in more numerous situations than does his twin.

We can use the chromatic color responses as still another measure, namely, as a measure of the intensity, depth or superficiality of emotions. We can use the following scale. Color responses which refer to objects or processes that are vitally important for survival are indicators of the earthy or most powerful emotional impulses. Examples are: fire, blood, sexual organs, meat, food. Color responses which contain objects artificially created by man indicate the most superficial emotional impulses with the weakest potential driving power. All other color responses indicate emotional impulses of moderate intensity; the most frequent are landscapes, seascapes, flowers, anatomical specimens, and animals. According to this scale, Dick shows the greater diversity in emotional responses. He is capable of both strong positive and strong negative feelings. He can also manifest very superficial feeling reactions which mean little to him and stir him little. On the other hand, Tom's strongest emotional impulses are negative (as suggested, e.g., by the "bloody and spongy lung tissue" and "the geological cut through the earth

revealing different layers of earth"). His positive emotional impulses show only a moderate or average intensity. Thus, it is possible that the negative emotional attitudes troubled Tom more than they did Dick.

We can now turn to another significant indicator of potential behavior, to the human movement responses. They reveal the deep seated attitudes which individuals tend to assume toward others when dealing with them in personally vital matters. Both twins have many M (human movement responses), which suggest that they have given a great deal of time, feeling and thought to the development of attitudes which determine the role they play in vital interhuman relations. Again Dick (with 10 M) seems to be more complicated than Tom (with 7 M). Dick's M can be easily divided into two distinct types. In one type, the human figures execute an expansive and assertive movement, but only with parts of the body. The actions do not involve the whole body. For example, we have women raising their arms but standing still; or just feet, jumping up and down, the rest of the body not being seen; or Marcel Marceau's hands catching and holding a butterfly; or legs trying to move but they stick in mud. Thus, assertiveness and the exhibitionistic wish to be noticed exist as real personality forces, but Dick limits these tendencies even in their wish states of potential drives: even his dreams are limited. He does not display modest reticence in the other type of his M where whole bodies are engaged in passive or compliant movements, as exemplified by the Eskimo who floats down in the breeze; the people leaning against something; and the clown sitting on a tree stump. Dick finds passivity or compliance more acceptable than active assertiveness of his prowess. He is more comfortable when led than when leading.

Tom's M are more of one type. They do not differ among themselves as much as Dick's M do. Tom is competitive, plainly sadomasochistic, argumentative, and assertive, and more frankly exhibitionistic. The role he would like to play seems composed of these traits which are not actually incompatible with one another, but which nevertheless frustrate each other to some extent. Dick shifts from compliance with the will of others to limited assertiveness far more conspicuously than Tom possibly ever could. Tom's

specific attitudes are more predictable than are Dick's, according to this analysis of their M

This difference between the twins is indicated also by their FM, their animal movement responses. Tom's "flying vulture," "bulls taking off upwards," "horses taking off at great speed with front feet flying," suggest that he was assertive, active and aggressive in his early childhood—more so than in his adult years and more than his twin Dick in early childhood. Dick's FM are exemplified by a flat fish swimming along a sea lion keeping his mouth open, an imaginary animal coming out of an imaginary cocoon. These movements are much more quiet, much less expansive and much slower than those we find in the FM of his brother. We infer, then, that the twins differed in their basic personality structures even in their early years of childhood.

Both brothers would like to feel freer inwardly than they do. Tom resents his inner inhibitions more than does Dick. He revealed this by producing four inanimate movements responses while Dick produced only two. The inanimate movement response is defined as an indicator of desirable but unrealizable basic attitudes. While both twins seem to have the habit of psychological self-observation, Tom seems to practice self-observation much more than does Dick.

Let us now turn to the whole responses, i.e., responses covering an entire inkblot. The number of W (whole responses) is a measure of readiness to exert oneself in order to achieve something of importance to others and which society rewards. If there are no W, there is no active ambition and no achievement. In his first record, Dick produced the large number of 21 W. Tom gave 11 W or the number of W expected of an intellectually superior adult. In comparison with his brother, Dick showed the stronger drive for achievement and the greater expansiveness in tackling practical and intellectual tasks.

The $F+\%$ is important insofar as it is a measure of the capacity for conscious control primarily over thought processes, but secondarily also over motor behavior. Tom's $F+\%$ is almost 100, or very high. This points to accuracy and precision in thinking and in acting. Dick's much lower $F+\%$ is 79, this is within normal limits. Dick's thinking, then, is not as meticulous and not as uniformly

precise as Tom's. Tom exercises a greater self-control over his thoughts and actions.

The verbal content of Rorschach responses also contains hints regarding potential behavior. However, content allows only limited inference. We cannot infer from the absence of a certain content in the Rorschach record that the personality trait, associated with the content, is not part of the subject's personality. Some very important traits cannot be excluded simply because the Rorschach record contains no indication of them. Among them are, for example, alcoholism, homosexuality, and personality changes caused by organic brain diseases. When positive evidence of these traits is produced during the Rorschach examination, we are justified (within a margin of error) in concluding that the associated trait is part of the subject's personality. The traits which allow a definite conclusion only when the evidence is positive, but not when evidence is negative, are difficult to measure or are undetectable when they are not prominent, that is, a trait must reach a certain level of prominence before it becomes measurable. The situation does not have to remain that way forever. We must improve our non-test, independent criteria of alcoholism, homosexuality or brain damage if we expect to improve the test's diagnostic power. We lack adequate independent criteria of mild alcoholism, mild homosexuality, and mild organic brain damage.

Another method of improving conclusions drawn from the analysis of the verbal content of Rorschach responses is to relate content to different formal components. Thus, content projected into the F or pure form responses is related to the individual's thoughts, fears or expectations concerning his environment, while content which appears in color responses and particularly in the human movement responses, reflects the individual's own genuine action tendencies. Thus, for example, a sexual idea expressed in a human movement response is much closer to the core of personality than sexual ideas, expressed in form responses. Rorschach suggested that original responses, i.e., those which appear not more frequently than once in 100 records, are of special significance because they shed light upon the individual's most personal traits. This is a sound observation.

records of our twins, we find that they differ greatly in their sexual symbolism

I use six signs to infer homosexual tendencies when the signs are present, and refrain from saying anything about homosexuality if the signs are absent. For practical purposes the number of signs is limited to four because the last two (1, pp 359-360) occur very rarely. Dick has two of the four signs. He produced anal responses in three plates II, VI, and VII. He also was hesitant and inconsistent in identifying the sex of the figures in plate III. We infer that Dick has homosexual tendencies, but how strong are they? In plate VI Dick described the vertical middle portion of the bottom area as "rather rectal, the slit becomes progressively darker as it goes in." Dark or black color, associated with sexual content, frequently indicates guilt with acting-out. This response, by virtue of its statistical rarity and detailed description points to a pronounced interest in rectal openings. Dick gave an original interpretation also of the entire reversed plate VII calling it 'an archeological remnant of a female figure.' He saw only the buttocks and the legs, and commented that there was 'feminine grace to it.' Archeology is the science of antiquities, of things of the past. Dick thus intimated that woman or any activities connected with her body are remote matters as far as he was concerned. Heterosexuality was a thing of a primitive past. Many homosexuals say and possibly believe that they are a more highly developed human species than are the heterosexual men. Dick's homosexual tendencies probably are very deep.

The use of symbolism is always of doubtful value, but if we allow ourselves symbolic interpretations, we find confirmation for our conclusion in Dick's symbolic sexual responses. For example, in plate II he saw 'the bottom of a person jumping up grotesque feet going into socks,' noticing not only the red socks but the skin color of the legs that 'are going into the socks.' In the same plate he had a symbolic anal response. 'A fanciful rocket ship discharging a jet propellant, it has that dynamic feeling to it. A jet ejection after the blast. He saw several tails of different sizes and profiles. Plate VI, top vertical detail, gave him the feel of wood without the bark on it, stripped wood or driftwood. Plate V became 'a root or vegetable growing in the ground, like a funny shaped potato

with root hairs, just the root, cut off where it comes out of the ground" An original response in plate VIII referred to a "bird dressed in a fur jacket" The absence of vaginal symbolism in form responses is striking by contrast with the abundant phallic symbolism in both form and movement responses

In Dick's second record, taken two years later, the signs of homosexuality are somewhat different but equally massive

The twin, Tom, also produced anal responses, which suggests homosexual tendencies, but he weakened the evidence by associating anality with women (pointing to anal eroticism in a heterosexual setting) In the first plate he "saw" "buttocks, definitely a woman," and in plate VII "an anus, taking it head on" If we are to be consistent, we must infer some homosexual attitudes At least the potentialities for them are there Tom produced also genital responses, one male and one female Nothing can be found in Tom's human movement responses that would suggest homosexuality In the second record, taken two years later, the evidence is even weaker The number of sex responses dropped The one that was retained, the woman in plate I, is now "behind a transparent shower curtain" There is more indirectness and more discretion The other sex responses disappeared during the second examination On the other hand, the second examination elicited several symbolic answers which can be interpreted as wishes for greater sexual potency In plate VII, there was "a volcano shooting off steam and lava" in the area where he previously had seen "an anus head on" The usual heads in plate VII had "ponytails caught in an up-drift, standing straight up" Tom's homosexual imagery was much weaker than Dick's on both examinations Moreover, Tom associated with it distinct heterosexual ideas and images, which Dick did not do

At this point we might ask ourselves what we mean by homosexual tendencies Perhaps it is best to define them as an indication and result of frustrated heterosexuality In all but a very small number of cases (about 3/1000 in males, according to Dr. Hathaway), the etiology seems purely psychogenic There exist, of course, innumerable degrees and varieties of heterosexual frustration, from the mildest to the most severe Only the severe degrees of frustra-

tion lead to overt homosexual practices, and the most severe ones to exclusively homosexual practices. Tom is much less homosexual than his twin. Perhaps Tom's homosexuality manifests itself only in some sexual perversions (as conditions of his most satisfying orgasms) or in his need for some very special type of female sex partners. He shows some disinterest in women. Dick, on the other hand, seems to hate women strongly, and to turn away from them, rejecting them as desirable sex partners.

Homosexuals always have a partial or complete aversion to genital contact with the opposite sex. Nevertheless, some of them have strong sexual needs, are very sensuous, and can be genitally very active and potent. It would seem that Dick is endowed with greater sexual capacities than Tom. Male homosexuality is essentially a state of weakened interest in women, and is not necessarily a state of a weakened sexual appetite.

Of the two, Dick is the one who needs more self-control than Tom. Dick is more likely to get into trouble if he really is a confirmed homosexual.

The evaluation of overt behavior requires the same kind of analysis of the entire record, including all its components, as does the evaluation of potential behavior. Again to make this task possible in the present state of our knowledge, we shall consider components, one by one, concentrating on those which have the greatest bearing upon the active guidance, control, and eventual suppression of potential behavior.

The most important single indicator of self-control is the sum of weighted light shading responses. Both brothers have somewhat smaller Σc than ΣC . The ratio of $\Sigma c : \Sigma C$ is 4.0 to 6.0 in Dick's first record, and it is 4.0 to 6.5 in Tom's first record. Automatic self-control, that is a type of self control which does not depend on conscious and deliberate effort, is somewhat inadequate. However, this is not the only type of self-control there is. There exists also a conscious and deliberate self-control, the best measure of which is the $F+\%$. This kind of control is less desirable than the automatic type, because everything that is conscious and deliberate is much more subject to fatigue than is the automatic or self regulating self-control. Tom's $F+\%$ is higher than Dick's. Thus Tom

knows better how to control and discipline himself. Since Tom has an average amount of drive for his IQ, while Dick shows an excessive drive for achievement, we would infer again that Tom is much more capable of restraining personally or socially undesirable action tendencies than is his twin. Dick expressed a need for a better self-control in an indirect way by making repeated references to the symmetry of the inkblots.

Tom, too, commented on the symmetry of the plates and consequently he, too, felt the need for improved self-control, although Tom had already been well controlled. In fact, Tom was obsessively meticulous. He noticed the degree of adequacy between many of his images and the respective blot areas. In other words, he evaluated the truth value of his thinking while he was thinking, doing it in an exaggerated degree that interfered with spontaneity of thought. He had what I consider to be the classical sign of the obsessive, namely, spontaneous and unfavorable self-criticism of some of his own ideas. For example, he started his responses with a butterfly. Having given this response, he took it back, saying that it was a torn moth rather than a butterfly. He explained that when he had started looking at the plate more carefully, analyzing the shades or colors, and noticing the holes, and then taking all the other details into consideration, he found that the plate did not look like a butterfly, but like a torn moth. In plate II, he saw Australian teddy bears in both gray areas, but ended by saying that it was only the right side which looked like a teddy bear. This kind of spontaneous hair splitting and self-criticism occurred in practically every plate, implying a strong obsessional trend. It was then unlikely that Tom needed increased self-control. On the other hand, Dick was likely to act out his potential drives more readily than his twin, Tom.

It is interesting to note that Dick, as well as Tom, showed practically no shock of any sort. None of the 10 inkblots seems to have caused a significant temporary delay or intellectual paralysis. The initial reaction times varied from 2 seconds to 9 in Dick's record, and from 3 seconds to 6 in Tom's record. One would be inclined to infer from the initial reaction times that neither twin experienced particularly strong anxiety. This would make it prob-

able that neither of them tried to repress their latent tendencies, including their homosexuality. Since the twins differed greatly in potential homosexual behavior, their overt actions would show even more difference since Tom was the better controlled twin.

It seems to me that before we can make further advances in the art and science of predicting overt behavior from projective test data, we must be better able to infer from the test data a more complete and more accurate list of the subject's potentialities

We all probably agree that it is easier to infer potentialities than actualities. It is far easier to ascertain what the individual is potentially capable of doing than to predict when and how he is actually going to do it. We have not yet completed the job of inferring potentialities. Consequently the inferring of actualities is still "unfinished business," although we have already broken the ground.

REFERENCES

1. Piotrowski, Z. A.: *Perceptanalysis: A Fundamentally Reworked, Expanded and Systematized Rorschach Method* New York, Macmillan, 1957.

ADDENDUM*

When the results of re-examination in 1959 are analyzed, there emerge few significant differences between Dick's two records. The greatest and most significant difference is the drop in whole responses, W, from 22 to 14. The implication of this change is that Dick's drive for outstanding personal achievement decreased from a very high level to average level for an intellectually and educationally superior adult. A corresponding change took place in the number of Dick's small detail responses, d. There was one d among 57 responses of the first record, and there were five d among 53 responses in the second. Dick, then, seemed to have reduced his active ambition, and ceased to struggle as hard as he

*Prior to publication of the symposium proceedings, participants were invited to make additional comments either in regard to Dr. Hooker's discussion or test data not previously interpreted.

had two years earlier. In other respects his two records do not differ significantly.

Tom showed a deeper personality change. As a rule, the human movement responses vary least and last. They pertain to very important personality traits, associated with the basic attitudes which subjects assume when dealing with others in personally vital matters. There was no difference in the quality or quantity (10 on the 1st, 11 on the 2nd examination) of Dick's M, but the quality of Tom's M showed significant changes. This significance has been evaluated in the light of modifications observed in the M of neurotic patients successfully treated with psychotherapy. The number of Tom's M did not differ, being 7 and 6 respectively. The first time Tom interpreted plate IV as "a monster coming this way, at you." The second time he observed calmly: "I remember the last time I looked at it, it seemed very threatening. If I saw it (plate IV) for the first time, it would look like some kind of vine hanging down, something you might see on a weeping willow." We would infer from this difference in handling plate IV that Tom's sadomasochism weakened. Another M change corroborates this alleviation of aggressiveness. During the first examination Tom saw in the sides of the top gray in plate X "people from Mars, arguing with each other." The second time, he interpreted the same area as "little fantastic creatures in a comic strip, saying 'lead me to your leader, I am from outer space'; jabbering, talking to each other in outer space language." The creatures stopped arguing with each other and began to talk and cooperate with each other. There was also a human movement which supplanted an inanimate movement. During the 1st examination the patient saw, in plate IX, "a fountain with two dragons on either side (in no motion or activity); the water was coming out of deep earth." This inanimate movement was changed into a human movement, a friendly, enjoyable and social scene; two human-like "dragons, one on each side of a fountain; drinking the water, sort of enjoying each other."

However, Tom's anxiety states seemed to have become more acute, if not more frequent, despite the basic improvement indicated by the human movements. This conclusion is drawn from the very great plate VII shock (IRT 40 seconds) which was absent

in the first record The longest IRT in the first record was only 6 seconds (on plate VI) Apparently his ambivalence concerning psychosexual relations with women increased during the treatment, possibly because of his improved insight He probably became conscious of the unsatisfactory and neurotic relations which he had had with women Two years earlier he seemed to be less troubled by this problem It is possible that he began to miss a more adequate heterosexual gratification, as a result of decreased aggressiveness, weakened inhibitions and strengthening of personality The decrease in the absolute and relative number of negative color responses, which are a measure of the desire to dissociate from others in order to sever unpleasant emotional ties with others, was in keeping with other noticeable personality improvements Fear and hate of others diminished

The signs of homosexuality ("inadequate heterosexuality") disappeared from Tom's second record He did not repeat the two anal responses from the first record, he did not hesitate regarding the sex of the plate VII M figures, and he no longer mentioned "the bullet shot from a gun" in the bottom sexual area of plate VII Thus the chances of satisfactory psychosexual relations with women have improved, although the patient still was tense and neurotic about them On the other hand, the indications of homosexuality in Dick's records did not undergo any significant change in strength or quality

The second Rorschach record of each twin bore a far greater resemblance to his own first record than it did to either record of the other twin Nevertheless, the similarities between the twins were strikingly greater than between brothers who are not twins, let alone between two strangers

DEVELOPMENTAL HISTORIES OF THE TWINS

ARTHUR C CARR, PH D

Although the test protocols of the homosexual twin and of the heterosexual twin were identified, no other clinical data were given to the symposium participants other than indication that Tom, the heterosexual twin, had requested and received psychoanalytic treatment between the time of initial testing and subsequent re examination two years later. However, in order to enable our discussant to relate the psychological test interpretation to the clinical material, the following developmental data on the twins were made available to Dr. Hooker.

DICK AND TOM

Dick and Tom are 31 year old identical twins who were born in a medium sized European city, where they lived with a sister and their parents until the age of eleven, when the family was broken up temporarily because of national, religious, and racial discrimination. At the time of initial testing, Tom, the heterosexual twin, had requested psychiatric help for complaints of depression, difficulty in relating to others, and job dissatisfaction. Throughout Tom's subsequent psychoanalysis, Dick, the homosexual twin, maintained that apart from reality problems, there was nothing about his emotional adjustment which concerned him sufficiently to warrant any psychotherapeutic assistance.

Both clinically and in psychological tests, Tom appeared less well integrated, more depressed and anxious, less productive and creative, and less satisfied with himself than did Dick. Tom expressed greater dissatisfaction with his body and body parts, wishing that such things as his eyes, wrists, chin, shape of head, height, penis, waist, hair, and trunk could be changed. There is general agreement from all sources, including reports from the twins' parents, that Tom is much more dependent than Dick, and that he

turned to Dick for help in such things as making friends and getting jobs. Dick has undoubtedly been the more successful and productive in his chosen profession.

Dick—The Homosexual Twin

(This is a summary of 24 hours of recorded interview with Dick, for which he volunteered.)

Dick is the active homosexual of the twins. He has never had heterosexual experiences, although for a short time he did engage in more heterosocial experiences than he has in recent years. He is at present living with a homosexual partner in what he hopes will be a permanent relationship. He states that he is happily adjusted and that he feels he has no problems of "real depth."

Dick was the first born of the twins. He states he was weaker than his brother, and that he had received extra care and protection in his early years. This weakness was presumably due to a heart condition (never confirmed). He has only a vague memory of his first 5 years of life, but believes he and his twin were cared for mostly by maids, seeing little of their parents during this time. For as long as he can remember, he feels his mother played the aggressive, dominant role in the family, sheltering the father from any unpleasant reality. He recalls that she would frequently state, "Don't tell that to your father—you know how excited he gets." The sister, one year older than the twins, is singularly absent in Dick's accounts of familial experiences.

Dick's earliest memories are of his fifth year. He recalls his earliest experience as occurring about this time. "We were on a walk, my brother and sister and I, and she fell in the river—somebody fell in the river—I think it was she. There was a lot of yelling and screaming. The seriousness of it was the immediacy of the thing." At this time he began to show a number of difficulties, including nail biting, temper tantrums, stuttering and nightmares. The latter persisted until the age of 8 or 9. He reports that Tom showed none of these difficulties. The children slept in the same room, with the twins sharing one bed. Dick would frequently dream that people, fantastic figures, were coming to get him. He would awaken, frightened and crying, and would then be taken into his mother's bed. He reports periods in which he didn't know

if he were awake or asleep, when he felt he was about to be overtaken by a big, square, transparent mass that would come rolling toward him. He remembers that his speech problem continued until he was about 11.

Dick began kindergarten at the age of 5, when Nazism was becoming popular in the country of his birth. Boys began to wear arm bands signifying party allegiance, and for the first time the twins felt excluded from their peer group. They also felt "different" because their clothing was made by the mother, and had what Dick calls a "too precious" and "peculiar" appearance. Dick feels that Tom undoubtedly had the same feelings, and states they had no sense of individuality until the age of 16, after the completion of high school. It "felt like Tweedle Dum and Tweedle Dee . . . just like a carbon copy."

Dick recalls at 8 or 9, a "trauma": "My brother and I were visiting a friend of the family on bicycles. Our parents didn't like us to ride bicycles. There was a fair in town. My knee and finger were cut and later became infected. I had also chipped my tooth. I couldn't admit at home that I had fallen off a bicycle. I told them I was tripped by a kid. I felt guilty and was angry for having to make up a story. I was sick a couple of weeks, probably sicker than I should have been." He also recalls as a "trauma" the time his brother "beat the shit" out of him at the age of 9 because he had teased him. Dick's references are frequently made in anal terms. He remembers another experience at this age, when he was told of a boy being disrobed by other boys in the woods. He wished he could have been there, but felt that this wish was not shared by his brother. Nightmares continued during this period.

School life was becoming more Nazified. Since the family was half Jewish, they were given the privilege of "passing," although feelings of isolation arose because of non-acceptance as either Jew or Christian. At the age of 11, after the father had been able to leave the continent, the twins were sent to England for what was to become two years of schooling. Life in England is recalled in ambivalent terms. One joy was the similarity of everyone's dress, so that the boys no longer felt conspicuous. Dick continued piano lessons; Tom sang. There was insecurity about money, however,

and Dick reports engaging in petty theft for comic books and movies until he was caught and given a verbal reprimand, which he says made a great impression on him and "removed the need to take money"

At the age of 13, arrangements were made for the boys to join their parents, both of whom were then in the United States. On the boat, a young steward in play with the children began "feeling everybody up," which Dick recalls as an exciting experience. Dick's first overt homosexual experience occurred during his first year of high school, when another boy masturbated him. He had no guilt about this pleasurable experience. A short time later, another boy, about 3 years older than Dick, performed fellatio on him, an experience which he found amazing and shocking. He reports that in all early experiences, his partner had been the one to initiate the activity. A period at summer camp at the age of 14 provided much homosexual contact. These experiences were not confided to the brother, although in general they did share confidences. There has been only one homosexual experience between the twins, recalled by Dick as mutual masturbation which he believes Tom initiated. (This experience is recalled differently by the twins.) Dick states that the experience was not particularly enjoyable, perhaps because "it was not like two different people."

Upon completion of high school at age 17, Dick entered a music school, whereas Tom began college training. During the first year of his separation from Tom, Dick enjoyed a new sense of freedom. To avoid being drafted into the Army, the twins volunteered for the Navy the following year, and served in the same city for a 13 month enlistment. Although Dick had no homosexual experiences during his first year in music school, he had numerous contacts while in the Navy. Upon discharge from the Navy, both twins returned to their respective schools. In what is described by Dick as an unjustified charge, he and five other boys were dismissed from school because they presumably had attended a party where homosexual activities occurred. Although the charge was never explicitly made, the school director, when asked for an explanation, also referred vaguely to the "Communist business," and would not reconsider dismissal. Dick describes the charge as a

very unfair one, stating he never attended such a homosexual gathering, and that at this time he had not accepted homosexuality as a way of life. He became somewhat depressed when his letters of protest to the school were ignored, and he found himself both out of school and without a job.

Following a short period at home, Dick worked as a theater usher, conducting music on the side. This was in New York, where Dick found a sense of freedom not previously experienced. During his first summer in New York, through discussions with an old friend from music school, he achieved a greater degree of acceptance of his homosexuality. That fall, he found a room in a boarding house where many other homosexuals lived. In subsequent experiences, he concluded that being a homosexual didn't necessarily mean being like many homosexuals, the "feminine, droopy wrist, and the chatty, gossipy type."

Employment during the next two years included work in a music store and a publicity firm. An opportunity came for a job with a large company associated with musical interests. Dick has continued with this work with eminent success. During this time he met the man with whom he is now living, and has maintained this relationship for 8 years, exclusive of a six-month separation. Sexual activities are predominantly mutual masturbation, but include oral and anal activities as well. It appears that this homosexual partner, who is approximately as old as Dick, is excessively dependent on him. (Recent clinical information revealed that Dick's partner made an abortive suicide attempt when faced with a forced separation for business reasons.)

Nine years ago, Tom also came to New York. Dick describes Tom at this time as a "bore," "not pleasant with people," and "inconsiderate." Through a mutual friend, Tom went into therapy, an experience later leading to psychoanalysis. At the time of retesting, following Tom's psychoanalysis, Tom and Dick live in the same apartment house. Dick describes Tom as being a "much more human" person as a result of therapy. He feels Tom is still dependent on him.

At the completion of 24 hours of interview, and at the time of retesting, Dick maintained his sexual orientation. In thinking

about why he is a homosexual, he believes it may be that his mother, described by him as "cold, tactless, and preoccupied with herself," may symbolize all women to him. However, he is not interested in exploring the psychodynamics of this relationship.

Tom—The Heterosexual Twin

(This is a brief summary and abstract of Tom's free associational material from approximately 300 hours of psychoanalysis.)*

After a short period of psychotherapy, Tom entered psychoanalysis at the age of 29. His complaints were feelings of depression, difficulty in establishing deep and lasting relationships, and dissatisfaction with his achievements. Although he experienced a homosexual seduction during adolescence, Tom has been consistently heterosexual since then. At the time of initial testing he reported some potency difficulty in his heterosexual relationships, which have been frequently with older women. In the course of psychoanalysis Tom married a girl of his own age, and at the time of re-evaluation appeared to be making a satisfactory adjustment to marriage.

In spite of the apparent similarity in the major life experience of Tom and Dick, a striking difference in the emotional atmosphere encountered by them in early life became delineated in the course of Tom's psychoanalysis. Tom had always been told that he was responsible for his mother's ill health by "jarring her insides" during his birth. Because of his presumed heart difficulty, Dick became the object of the mother's protection and concern. He was differentiated from Tom by a more prominent split existing from birth in Dick's lower lip. In Tom's psychoanalysis, the paternal grandmother and a nursemaid emerged as important figures in his early childhood, the grandmother as the only accepting person, and the maid as an early sexual fantasy object and symbol of femininity and maternal feeling. Tom's earliest memory stems presumably from approximately 3 years of age: "I remember one thing. Mother, father and my brother—we all took a bath together. I would sit on mother or father's knees and they would sing a song about a river—the Isar or the Danube."

*The writer is indebted to Dr. John D. Rainer for the data on which this summary is based

It became apparent in Tom's psychoanalysis that early in life he had begun to repress his jealousy and rage toward his brother, as well as his fear and hatred of his parents. The father was away from home a great deal, and was considered weak, childish, and a failure. The mother was described as cold, inhibited, nervous and ailing. Tom hid his reactions to them by retreating to his room. He talked very little at home, and what was to become a life-long feeling of alienation, poor self-identity, incapability, and periodic depression began.

Both twins came to the United States by ship at the age of 13 to rejoin their parents. It was on the ship that Tom, naive about sex, was masturbated by a sailor who explained, "This is what you do with girls." It was Tom's first orgasmic experience, and he recalls that he found it pleasant. At the same time he felt ashamed, and he told no one about this experience until much later. In the course of his analysis, Tom said that he had doubts of his manhood as a result of this episode, and that these feelings were revived 8 years later when he found out that his brother was homosexual. Before the age of 13, his only sexual memories had been laughing at mysterious goings-on in a lover's lane, and of his sleeping in the same room as his sister until the age of 3. Masturbation continued through adolescence with guilt.

During his high school days in the United States, Tom played with a group of boys his own age. When an occasion of mutual sexual exploration between these boys was brought to the attention of Tom's father, the father told Tom, with embarrassment, that such things should not be done. Although the father, in interview, does not recall this episode, the prohibition was seemingly of crucial significance in deterring Tom from future homosexual experiences. In general, there was a complete absence of sexual discussion or sexuality in the home. About this time, Tom had his first sexual relationship with a girl who lived next door, stopping short of intercourse. Tom went away to college shortly afterwards, where for the first time he felt completely happy.

College was interrupted when the twins were inducted into the Navy at the age of 18. During the next two years Tom became aware of the fact that Dick did not go out with girls. At the same

time, Tom began a relationship with a friend of his sister's, who finally "let" him "seduce" her. After leaving the Navy, he entered a midwest college and later graduated with honors. During this period Dick wrote Tom telling him of his homosexuality, and Tom wrote back encouraging Dick to try dating girls. At the same time he felt compelled to send money to further Dick's career.

Towards the end of Tom's college years, he met a girl with whom he had satisfactory and frequent sexual relationships, and to whom "for some reason or other" he became engaged. Not wanting to marry her, however, he broke off this engagement. There followed a period of painful and unsatisfactory employment interviews in which the patient did not know what he wanted, did not think he was worth anything, and could not present himself in a favorable light.

Tom finally obtained a respectable clerical job with a large corporation, and began a period of confused sexual and personal relationships. He lived in the same rooming house as Dick, where he felt both inferior to his brother and out of place in the odd and strange homosexual world of which his brother was a part. He began having sexual relationships with a woman twice his age, and finally moved into her apartment. Simultaneously, he had an affair with a girl of his own age who lived in his building, and for the first time had symptoms of impotence. Following an affair with still another older woman, he entered a brief period of psychotherapy with a social worker. Tom entered psychoanalysis two years later at the age of 29, having experienced continued and increasing difficulty in making friends, and finding it impossible to define the role he should take in relation to other people.

Early in Tom's psychoanalysis, it became evident that the patient considered his weaker brother to be the mother's favorite. Tom appeared to have turned away from the mother, seeking maternal and womanly care from a grandmother and a nurse, while repressing all hostile and competitive feelings toward his brother. When he found that girls preferred him to his brother, he became anxious, self derogatory, and depressed. Nevertheless, instead of his brother's fear of women, he manifested a counter phobic "Don Juan reaction," most of his objects being older or married women.

There was evidence from the patient's transference and associations that in this behavior he was reconstructing his particular family constellation. To avoid the guilt he would experience if he acknowledged that his mother had favored him, he left her completely to his brother. He repressed his rage and rivalry to his brother and father. Seeing the father as a weak person, Tom was unable either to express his hostility to the father or to identify with him.

During psychoanalysis, Tom achieved a greater independence from Dick, after facing his own aggression and jealousy toward him. Tom also found in the analyst a more consistent and dependable father-figure. During the analyst's vacation, Tom married his first girl friend. The marriage appeared to be a successful resolution of the patient's problem of confused relationships, although for some time it brought forth a recurrence of old patterns. It was believed, however, that the major problems were successfully worked through during the next year and a half of psychoanalysis.

Some of the bases for Tom's heterosexual solution to his psychosexual confusion became clear in the course of his psychoanalysis. Tom had seen the father as a non-forceful figure, but as one who nevertheless directed him away from adolescent homosexual play. The memory of a nursemaid whose femininity and body attracted him as a young boy, and a reaction formation against the shipboard homosexual seduction and his brother's homosexuality combined to swing the balance. After working through his frustrated rage toward women, he was able to become a tender and considerate husband.

On the other hand, evidence also was presented in Tom's psychoanalysis of the extent to which the mother apparently encouraged and reinforced Dick's overt homosexuality, both by denying its existence, and also by using his disinterest in girls as a model against which to compare Tom's behavior unfavorably. While actively discouraging the twins in their contacts with girls, the mother continued to visit Dick and his male paramour in their apartment. Meanwhile, she frequently criticized Tom, saying, "Why aren't you like your brother?" The parents' attitude toward

Tom's marriage has been a pessimistic one, with expressed feelings of disappointment presumably in relation to the girl's family.

SUMMARY

In summary, Dick and Tom are 31-year-old identical twins. Dick has been exclusively and overtly homosexual for many years. Tom, except for isolated adolescent experiences, has been consistently and overtly heterosexual. At the time of initial testing, Tom had requested psychoanalysis for complaints related to depression and role confusion. Interpretation of the existing evidence suggested that Tom was less well integrated, more depressed and anxious, less productive and creative, and less satisfied with himself than was his homosexual brother. At the time of subsequent re-examination two years later, on completion of Tom's psychoanalysis, a greater integration of defenses was clinically apparent in Tom's adjustment. Dick continued to maintain that he had no problems which he felt would warrant psychotherapy.

DISCUSSION

EVELYN HOOKER, PH D

We are indebted to Dr Carr for arranging this symposium and making available the extraordinarily rich projective test material of identical twin brothers with their divergent patterns of overt homosexual and heterosexual behavior. Although we do not know how often such 'experiments of Nature' occur, according to Kallman (2) they are quite exceptional. In commenting on 40 monozygotic twin pairs he asserts (2, pp 290-291) that 'this series does not include a single co-twin of an overtly homosexual person standing at least midway on the homosexual scale, who is classifiable either as entirely heterosexual or as homosexual below group 3'. The majority of one-egg pairs is not only fully concordant as to overt practice and quantitative rating of their aberrant sex pattern but they even tend to be very similar in both the part taken in their individual sex activities and the visible extent of feminized appearance and behavior displayed by some of them'. A single exception (we know of others) gives us unusual opportunities for examining the relationships between personality dynamics as revealed in projective tests and overt behavior, since, as Henry points out, we do suppose that they were unusually intimate in their developmental years and hence that the resolution of sexual identifications was in some sense a joint venture.

A careful reading* of the excellent papers in this symposium makes it immediately apparent, however, that the authors' task was structured in such a way that the particular test protocols were not the primary focus of attention. Instead, they were asked to concern themselves with the theoretical issues and methodological problems involved in predicting overt behavior from projective

*Because all of the papers were not made available for careful study before the symposium, this discussion was written later and represents an extended elaboration and modification of remarks made at the time as well as the addition of considerable new material.

test materials. Each author was then free to use the particular double set of test protocols (test and re test from each twin) in any way he chose.

Since the protocols were clearly labelled 'homosexual' or 'heterosexual,' prediction of sexual object choice was not involved but within this general framework the predictive field was completely open. As a result, we have four remarkably varied and idiosyncratic patterns of handling the data. These constitute a valuable contribution to our understanding of the work ways of distinguished projective test analysts.

Evidence is accumulating that the validity of prediction of either overt or covert behavior from projective tests leaves much to be desired. As Little (3, p. 287) expressed it, in a symposium similar to this one, a year ago, "It is somewhat embarrassing to have to say that the published evidence on projective techniques indicates that they have either zero, or at best, very low positive effective validity indices. Even in those studies with the most positive of results, correlations are of an order of magnitude which make predictions for the individual largely a waste of time." Little and Shneidman (4, p. 26) have more recently demonstrated that the reliabilities of interpretations made from psychological tests are so low that 'it would appear that efforts to establish the 'validity of our current psychological techniques are premature until adequate interpreter reliability has been established."

In the light of this depressing evidence, let us look at the papers in this symposium. None yield completely to the prevailing pessimism about the task of prediction, despite their recognition of its inherent complexities and hazards. Instead, they have attempted a formulation of the problems involved in stating relationships between (a) personality dynamics (described in such terms as motive systems, conscious or unconscious, endogenous or intrinsic, processes), (b) situational factors, and (c) overt behavior. What they seem to be saying to projective test workers is "Yes, it is extraordinarily difficult to predict overt behavior—especially since we don't even know the parameters of such prediction. Let us not completely surrender to pessimism. If we can become more sophisticated about the variables involved and learn how to weigh

the clues obtained, recognizing that predictions are contingency predictions, we can improve our accuracy. Even though projective tests 'work' best for the discovery of potentialities (Piotrowski), covert processes (Henry), intrinsic processes or enduring intrapsychic systems (Forer), or unconscious processes (Hutt), nevertheless we do obtain clues to actualities, or to overt, extrinsic, or conscious processes." Furthermore, as Hutt phrases it, "we can't have one without the other . . . if we conceive of all overt behavior as the end product of internal homeostatic processes designed to offer the individual maximal adjustment . . . to external as well as internal stresses."

The critical question is how to predict overt behavior from the covert. Forer's answer is that in the Sentence Completion test "first-person items are more closely congruent with extrinsic prediction and are thus more nearly isomorphic with social situations and public behavior, whereas third-person items are more likely to evoke responses representing deeper psychic levels . . . we look to the disparities between first- and third-person responses for indications of relationships among psychic levels and as cues to modulating the ego functions which are so necessary to making extrinsic predictions." Further, each item is considered "as a potentiality for action"; and, by clinical comparisons on such dimensions as (a) situational determinants of affects, wishes, and actions, (b) thresholds, (c) forms, and (d) intensity, relative probabilities of action are estimated. Forer then proceeds to give us very specific predictions about the twins, as illustrations of his particular logic about the relation between intrinsic and extrinsic processes.

Henry, while stating that "internal dynamics do have something to do with the prediction of behavior," does not attempt to give us principles or methods for inferring one from the other. Instead, he illustrates a specific logic for inferring the sexual orientation from the TAT by focussing on an analysis of "ego and role levels" which, to this discussant, seems to combine both internal dynamics and overt behavior.

Piotrowski answers the question by stating that our estimation of the actualities (overt behavior) will be more accurate if our knowledge of potentialities is increased, and, more specifically, by pointing to the indicators of "active guidance, control and eventual

suppression of potential behavior" in the Rorschach. He makes few specific predictions about overt behavior, however, asserting that "we have not yet completed the job of inferring potentialities. Consequently, inferring of actualities is still unfinished business, although we have broken ground."

Hutt illustrates his particular method of "the development of sequential hypotheses" with Bender-Gestalt material from the homosexual twin only, making a number of predictions about overt behavior. He does not, to this reader at least, clarify the process by which he goes beyond the basic analysis of the "underlying source traits" to the specific predictions of their manifestation (or lack of it) in overt behavior.

The reader who has been impressed by the skill with which the most gifted clinicians are able to give us analyses of personality dynamics from projective tests, but who may also have been impressed by research evidence of the failure of these tests to give us predictions of effective validity, will not, I think, learn any strikingly new general principles or methods for correcting this discrepancy. Since clinical practice is always under the pressure of service demands, the likelihood is that clinicians who read these papers will pick up new clues, as well as new cautions, which will modify their own procedures. Forer's suggestions about discrepancies in levels, and their relation to overt behavior, are couched in sufficiently operational terms to be capable of being tested. In the other papers we do not see sufficiently detailed nor operationally defined suggestions about the relation between personality dynamics and overt behavior to permit testing procedures, although the theoretical discussions are excellent and informative.

Four different methods; four different clinicians; four different tests! Are we justified in evaluating the predictive power of the method or of the test used by comparing the pictures of personality dynamics and overt behavior with the biographical data? The answer is in the negative, for many reasons. Among these are: (a) lack of enough biographical or analytical material to serve as a criterion; (b) the obvious differences between the tests, in terms of structure and stimulus-pull; (c) the influence exerted on our clinicians by their knowledge of the overt patterns of sexual behavior, as far as preferred object of sexual choice was concerned,

and the fact that the heterosexual twin had undertaken psychotherapy; (d) lack of a common framework of predictive language; (It would have been helpful if the four clinicians had used a Q-sort of the same descriptive items of overt behavior. One would then be able to make a direct comparison of their statements about the twins) (e) the fact that striking success or failure in a single instance may be a chance occurrence and have exactly nothing to do with the predictive power of the method or test in question. In any critical test of prediction, it is obvious that all of these factors would have to be controlled.

Nevertheless, since the authors have been courageous enough to make some predictions, and since, whether valid or not, their procedures are being used in daily clinical practice, I should like to compare their pictures of the twins. If gross discrepancies or striking congruence occur, it may be valuable to examine these in some detail, especially since we so rarely have the opportunity of looking at test material from identical twins with divergent sexual patterns.

That there are special problems involved in predicting sexual adjustment is documented by Murray (quoted by Henry) in the finding of a negative relation between the overt and covert for such a need as sex. Henry points out, "Successful prediction based on internal dynamics assumes that we know what pattern of dynamics, once found in the case, to label 'heterosexual' and which 'homosexual.' It presumes, in other words, a matching of dynamics found in an individual case with some 'norm' of dynamics for a particular personality group. It is apparent, I believe, that, except in certain extreme and/or special homosexual groups, our knowledge of the varieties of dynamics involved in homosexual life-styles (not to mention heterosexual ones) is insufficient to make a predictive venture successful." Piotrowski is also concerned about this problem, as is evident in his statement that "we must improve our non-test, independent criteria of homosexuality if we expect to improve the test's diagnostic power." Forer, recognizing the complexity of the problem, suggests a wide range of situations which must be taken into account in predicting overt homosexual behavior from "homosexual personality dynamics." Although it may be assumed that each author has some cognitive model of what constitutes

homosexuality, Piotrowski is the only one who makes his model explicit. He says, "We might ask what we mean by homosexual tendencies. We would define them as an indication and result of frustrated heterosexuality." I am not sure how much this statement advances our knowledge since I submit we do not know what heterosexuality is—beyond the obvious fact that it involves attraction to opposite-sexed persons. And, further, even if we knew the parameters of heterosexual object-choice, it is an assumption still to be proved that homosexuality is frustrated heterosexuality.

An examination of the protocols will show the reader that our problem is made more difficult, and, I think, more interesting, by the remarkable similarity between any given pair. As Henry has commented, "The manifest similarities in content are so great as to suggest a hoax." They are much more similar, indeed, than test protocols which I obtained from a pair of identical twins, both of whom were homosexual! And I might add, lest the issue not be sufficiently confused, it was a frequent occurrence that judges, comparing matched protocols of heterosexual and homosexual subjects, in a study reported previously (1), commented that they were so similar that they could not make a choice between them unless forced to do so.

In comparing the predictions made by the four authors, we will omit those of Hutt, since, unfortunately (for our purposes), he did not use material from the homosexual twin. The other three (Rorschach, TAT, and Sentence Completion) are in essential agreement that the heterosexual twin (Tom) is more disturbed and more uncomfortable than his homosexual twin (Dick). Henry puts it positively, that the homosexual twin has a firmer sense of ego identity and life purpose than has his brother. To be sure, our authors knew that Dick had been in psychotherapy, and, as Henry makes explicit, one could derive the inference of the better adjustment of Dick from this knowledge—although many people who are not well adjusted do not seek psychotherapy! One should not minimize the influence of this knowledge on the inferences drawn by our test interpreters, even though they show us the steps by which they derive the inference from the test material. In fact, the more skilful the clinician, the more he does, in fact, make use of clues extraneous to the test material—and rightly so. Our clinicians did

not know, however, that, to quote Carr, "Both clinically and in psychological tests, Tom appeared less well integrated, more depressed and anxious, less productive and creative, and less satisfied with himself than did Dick." Thus they are able successfully to predict the degree of comparative disturbance.

They also agree—and in this Hutt concurs—that Tom's heterosexual adjustment is not altogether secure. Forer finds that "although Dick is more likely to act out homosexuality" he "would not predict that Tom might not have homosexual impulses," and that he is likely to seek older women as sexual companions. Piotrowski speaks of Tom's "disinterest in women" and says that "we must infer some homosexual attitudes if we are to be consistent. Although he is less homosexual than his twin, perhaps the homosexuality manifests itself in some perversions, or the need for a special type of sex partner." Hutt also finds that Tom has "fairly marked conflict over homosexual tendencies"; that "this problem lies at the core of his difficulties and insecurities in interpersonal relationships: he is really unsure of his sexual identity and overcompensates with apparent masculine behavior to mask this problem from himself." And, finally, Henry describes Tom as "technically heterosexual, preoccupied with his unsuccessful effort to resolve his horror of maleness by an overdetermined relation to women who are apt to be older and more maternal." We know from the analytical material that Tom's relations with women are disturbed, manifesting a "counter-phobic 'Don Juan reaction,' most of his objects being older or married women."

Since Henry restricts his predictions largely to role-behavior in the sexual sphere (although giving us a good bit more by way of dynamic underpinning), comparisons of specific predictions in other areas can be made only between the Sentence Completion and the Rorschach. (Hutt, as already pointed out, does not analyze the material from the homosexual twin.)

Both Forer and Piotrowski agree that the heterosexual twin is less likely to act out, that he has greater self-control but that he is in greater conflict. Our biographical data are sufficient to validate the prediction of not acting out homosexuality and of his greater conflict. Forer and Piotrowski appear also to agree in the comparative predictability of behavior of the twins: Piotrowski

finds the heterosexual twin to be more predictable; Forer also finds him to be more predictable in extrinsic behavior—less so in intrinsic.

The greatest apparent disagreement among our predictors is found in the description of the behavior and/or dynamics of the homosexual twin—a state of affairs which I do not believe is accidental or without importance. I would like to examine it in some detail. A comparison of the three personality pictures of the homosexual twin is not an easy one to make. I approach the task with caution, because the language used by the three clinicians is not identical and therefore permits my interpretation to distort the original intention and meaning. I have tried very hard to minimize such distortion, but may not have succeeded.

The first behavioral dimension which I want to examine (involving both covert and overt levels) is that of assertiveness vs. passivity. Henry finds that Dick is the "active male" and has taken over for himself the "assertive male elements" (from an incorporated father hostility). Piotrowski, on the other hand, finds that "passivity and compliance are more acceptable than active assertiveness of his prowess," although "assertiveness and the wish to be exhibitionistically noticed exist as real personality forces, but Dick limits these tendencies even in their wish states of potential drives even his dreams are limited." "Dick shifts from compliance with the will of others to limited assertiveness far more conspicuously than Tom possibly ever could." Piotrowski also speaks of Dick as having "the stronger drive for achievement, the greater expansiveness in tackling both practical and intellectual tasks." It should be noted that he is speaking of potentialities—not overt behavior. When he does speak of overt behavior, he does not refer specifically to assertiveness or passivity. However, since Piotrowski predicts that Dick will be more likely to act out his potential drives and that he limits assertiveness even in its wish state, one may legitimately infer that he will be, in general, more passive than active or assertive, except with respect to "practical and intellectual tasks." Forer does not use the terms "assertion" or "passivity." He does, however, speak of the homosexual twin as having "a higher threshold for accepting wishes for dependency and emotional close-

ness," "relative independence from situational determinants," and a lower "threshold for anger and other forms of acting out."

Thus neither Forer nor Henry sees Dick as an essentially dependent or passive character but, rather, as assertive in a masculine way, or at least with minimal manifest dependency. If Piotrowski sees him this way, he does not say so explicitly. Instead he appears to see him as passive and compliant in interpersonal relations (I assume), although having a strong drive for accomplishment in intellectual and practical tasks—that is (I assume), in impersonal situations. If this inference is correct—and I am by no means sure that it is—there is a discrepancy between the TAT (as used by Henry) and the Sentence Completion (as used by Forer), on the one hand, and the Rorschach (as used by Piotrowski).

In the biographical material we are told that Dick is eminently successful in his occupation and that, as we have noted before, he is more productive. We are also told that Tom is much more dependent. Apparently, the predictions from the SC and TAT are more accurate than those from the Rorschach, with respect to assertiveness vs. passivity in interpersonal relations; and all three tests are equally good as predictors of assertiveness or mastery in work situations. If, as has often been said, the Rorschach taps deeper psychic levels than do the other two tests, the first of these predictions does not come as a surprise, since basic tendencies, as revealed by the Rorschach, may be disguised in overt behavior. How, then, can we account for the second prediction. Perhaps the Rorschach, less structured in terms of human configuration, allows us to speak with less certainty about interpersonal situations than impersonal ones, such as work-accomplishment, although work is not often devoid of interpersonal factors. We must also add that we are not told, in the biographical material, anything about the interpersonal relations between Dick and his homosexual male companions, with respect to assertiveness or submission.

The second dimension on which there is apparent disagreement involves Dick's attitudes toward women. According to Henry, "He has neutralized all female cathexes but without binding resentment . . . relating to females only in formal role-defined ways." Forer describes him as "hating women," rejecting "love and marriage," and "ridiculing convention." Piotrowski also de-

scribes him as hating women. Thus, in this case, the Rorschach and the Sentence Completion agree in affirming that Dick has strong negative attitudes toward women, whereas according to the TAT this is not the case. Referring to our criterion data, the biographical material, we are told only that "In thinking about why he is homosexual, he believes it may be that his mother, having so many qualities he dislikes, might have come to symbolize all women." This doesn't help us much. It tells us that he dislikes many qualities in his mother—yet we are told that he is affectionate and generous with his mother and are not told whether he does have friendly, if asexual, relations with other women. Invoking the explanatory principle which we used in the previous case, of the Rorschach tapping deeper psychic levels, does not help us much, either, since in this case it is the TAT which conflicts with both the Sentence Completion and the Rorschach.

A third dimension on which there is disagreement is that of emotional responsiveness, with its implications for closeness of emotional attachments. Henry finds that Dick has 'special open areas of positive identification in the male peer area both as regards work and ego oriented activities as well as affect and impulse activities. He thus relates to males as the only real objects of affect and ego relatedness.' Forer finds that he 'sneeringly rejects the need to be loved most of the time . . . avoids enduring relationships and emotional closeness . . . is likely to cruise homosexually rather than establish continuous relationships.' Piotrowski finds him to be 'emotionally responsive, and showing greater diversity in emotional responses' (than his twin). 'He is capable of strong positive and strong negative feelings (positive feelings being defined as the 'desire to associate with others for the purpose of sharing pleasurable experience with them and negative ones as 'the desire to sever emotional relations with others, with the purpose of ending unpleasant interhuman relations). He is 'more emotionally comfortable when stimulated by others.'

Thus, while he is found as rejecting close emotional attachments in the Sentence Completion (and the language used leaves us in no doubt), the TAT affirms his capacity for emotional attachments to males, although not specifying the intensity and degree of closeness, and the Rorschach describes him as being capable of

strong positive emotional reactions (as well as negative), when stimulated by others. We are told in the biographical data that he has been living with a homosexual companion for the last eight years. We do not know whether he also "cruises" for other sexual companions, but an eight-year living-relationship should be indicative of the capacity for establishing close emotional relationships. Thus the TAT and Rorschach appear to be better predictors of emotional responsiveness and attachments to others than is the Sentence Completion.

Bearing in mind the fact that neither Forer nor Henry made use of the entire test protocol because they chose to illustrate a specific use of a limited amount of the material, we cannot make inferences about the comparative validity of the three tests—even if we had sufficient criterion data. Had either Forer or Henry used the remainder of their material, the predictions might have been modified. Nevertheless, in view of the discrepancies among the findings, even with this limitation, we do well to bear in mind the difficulties in drawing inferences from a single test and the wisdom of using a battery.

If our impression is correct, that there is greater discrepancy among the findings for the homosexual than for the heterosexual twin, and that this is not simply a chance occurrence (as we suggested earlier), an explanation of the discrepancies may have some importance for our understanding of homosexuality and its manifestations in projective tests. One explanation has been suggested by both Forer and Protrowski in their finding that the overt behavior of the homosexual twin is more difficult to predict than is that of his brother. If this be true, one would expect to find greater discrepancies or contradictions among the test findings.

A second explanation of the discrepancy is that the interpretation of the protocols is greatly influenced by the implicit assumptions about homosexuality held by the clinicians; a variable is thus introduced which may be quite independent of the particular protocol being examined. Without these assumptions, or theories—not just about homosexuality, but in respect to any personality or behavioral event—projective protocols would remain fragmentary hieroglyphics in an unknown language. Theoretical

assumptions are indispensable. In fact, the better the theory about personality dynamics involved in a given clinical phenomenon, the greater the probability that we will use projective tests appropriately. As some of the papers in this symposium have pointed out, we are in great need of such knowledge, especially in the area of homosexuality. In the absence of such knowledge, clinicians are likely to use their own experience or the current limited theories of psychopathology, and thus make the picture of the individual homosexual fit a clinical stereotype. Thus one picture of the homosexual is of a person incapable of enduring emotional relationships, sexually promiscuous and likely to "cruise" homosexually, ridiculing convention, sneering at love and marriage, hating women, not capable of restraining personally or socially undesirable action-tendencies, essentially unmasculine, being submissive to other males, an "injustice collector"—blaming situations rather than himself. That this is a valid picture of some homosexuals is indisputable. It is, however, as I have pointed out (1), limited in its applicability to homosexuals in general. Whether, for example, Dick is the assertive male, as Henry suggests, or one who finds passivity and compliance more acceptable than active assertion, as suggested by Piotrowski, may be a contradiction to be resolved by the fact that the Rorschach is tapping a deeper level than is the TAT and that Dick over-compensates for a basic passivity by assertiveness in overt behavior. If so, we are not shown how. A second possibility is that assertive masculinity and homosexuality are so often thought by clinicians to be mutually contradictory terms that evidence of assertiveness in the homosexual is linked with other expressions in behavior than the masculine role. Or, to take another example, homosexuals are so often thought of as hating women that in the absence of indications of strong attraction to women the inference of hatred may be quickly made. Not all homosexuals do hate women; in fact some greatly enjoy their company. The assumption that at some unconscious level they nevertheless hate women is, in the present state of our knowledge, unproved.

It is important to emphasize that in neither of the examples cited do we have sufficient evidence to validate the test findings—

although we are told that it is generally agreed that Dick is less dependent than is his twin. We are using these as illustrations of discrepancies which could be due as much to different theoretical conceptions of homosexuality as to differences in test data.

The problems created by the complicated relation between personality dynamics and overt behavior, set forth with such clarity in the papers we have been discussing, are given full illustration by the biographical and test material we have been examining. Our test interpreters agree, as we have seen, that Tom's heterosexuality is insecure: that he has some homosexual tendencies and that he is only technically heterosexual. In the summary of the developmental history of Tom, the statement is made that the factors which helped "to swing the balance" in favor of a heterosexual choice were "the memory of a nursemaid whose femininity and body attracted him as a young boy, and a reaction formation against the shipboard homosexual seduction and his brother's homosexuality," and "Tom had seen the father as a non-forceful figure, but as one who nevertheless directed him away from adolescent homosexual play." Why was there reaction formation against the homosexual seduction and the knowledge of his brother's homosexuality? Why did Tom, and not Dick, accept the father's direction against the homosexual play?

We would like to know the factors which helped to swing the balance in favor of a homosexual choice for Dick. Unfortunately, we do not have similar analytic material for him. There is so much that is similar in the manifest negative attitudes of the twins toward their parents and in their adolescent homosexual encounters. How did the preferential treatment of Dick by the mother—the most striking difference in the affectional climate in which the twins were brought up—influence his homosexuality? How did the rejection of Tom influence his heterosexuality? How was the greater dependence of Tom on Dick involved in the development of his heterosexuality; and how was the greater independence of Dick involved in the development of his homosexuality? This twin pair confronts us with many critical questions. We cannot answer these questions with the knowledge we have, but they need to be answered if we are to understand the choice of overt sexual pattern.

A final comment, which may compound the unanswered questions, is that under different life situations the same personality dynamics may lead to overt homosexuality or to overt heterosexuality. Or, to put it somewhat differently, an individual with a completely homosexual history of many years' duration, and for whom the test material indicates a pattern of "homosexual dynamics," may change (without therapy) to an exclusively heterosexual form of behavior—and with evidence of a high degree of enjoyment and satisfaction. We have obtained extensive material from one person in this group and know of others. Perhaps it is as true to say that similar personality dynamics may lead to very diverse patterns of behavior as that the same patterns of overt behavior may have diverse dynamic origins.

REFERENCES

1. Hooker, E.: The adjustment of the male overt homosexual. *J. proj. Tech.*, 21:18-31, 1957.
2. Kallman, F. J.: Comparative twin study on the genetic aspects of male homosexuality. *J. nerv & ment. Dis.*, 115:283-298, 1952.
3. Little, K. B.: Problems in the validation of projective techniques. *J. proj. Tech.*, 23:287,290, 1959.
4. Little, K. B. and Shneidman, E. S.: Congruencies among interpretations of psychological test and anamnestic data. *Psychol. Monogr.*, 73:No. 6 (Whole No. 476), 1959.

APPENDIX

TEST PROTOCOLS

SENTENCE COMPLETION TEST

INITIAL TESTING (1957)

*Dick**Tom*

- | | | | |
|----|---|--|--|
| 1 | When he was completely on his own, he | made out | read |
| 2 | He often wished he could | swim better | fly |
| 3 | It looked impossible, so he | gave up | tried it anyway |
| 4 | He felt to blame when | she fell after stumbling over his suitcase | she started to cry |
| 5 | When she refused him, he | had a drink | got drunk |
| 6 | I used to feel I was being held back by | my bad tonsils | my inability to fully express myself |
| 7 | He felt proud that he | bought it | had earned a scholarship |
| 8 | As a child my greatest fear was | nightmares | of saying the wrong thing |
| 9 | His father always | talks | was busy when he was most needed |
| 10 | Men | are all right | are the natural (finest) complement to women |
| 11 | A person who falls in love | is pretty lucky | is lucky |
| 12 | I was most depressed when | I didn't get a bigger bonus | I felt that I was unloved |
| 13 | My first reaction to him was | positive | of intense curiosity |
| 14 | When she turned me down, I | thought "to hell with it | I was deeply depressed for months |
| 15 | His new neighbors were | friendly | white people |
| 16 | Most fathers | are fond of their grandchildren | seem more human than mine |
| 17 | Sometimes he wished he | were not so dull | were dead |

18. Usually he felt that sex was fun
 19. I could hate a person who doesn't soak the dishes after a meal
 20. His earliest memory of his mother was not especially pleasant
 21. When I meet a woman, I say hello
 22. When people make fun of him, he doesn't care for it
 23. When he met his boss, he smiled
 24. When I think back, I am I didn't do better
 25. If the job is too hard for me, I let myself off
 26. Sisters are pretty, sometimes
 27. He felt his lack of success was his in-laws
 28. When they talked about sex, I sat up & took notice
 29. I used to daydream about being a conductor
 30. Most men are men
 31. When I have to make a decision, I make it
 32. Love is very precious
 33. My earliest memory of my escapes me father
- was the most beautiful pastime
browbeats children
nebulous
- wonder what impression I'm making
blushed
- felt interested
I've slept with older women
- try to get help on it
can be very good friends
his inability to express himself
- became interested
singing at the Met
in the business world are prejudiced
& too much concerned with their
jobs
- worry about it & talk about it and
then make up my mind
a many splendors thing
is negative

*Dick**Tom*

34. I was most annoyed when

he didn't finish the floors before we moved in

my brother didn't pay back a debt

35. Most mothers

are too concerned with that fact

are married women

36. Taking orders

is not always pleasant

is very easy

37. I dislike to

paint furniture

have a hangover

38. I feel that people

are pretty decent

are individuals

39. Most women

have a certain amount of charm

are concerned with their appearance

40. After he made love to her, he

did it again

talked to her about how it was

41. If I can't get what I want, I

wait

feel that something's wrong with me

42. When I am criticized, I

am not usually happy about it

try to defend yourself

43. He felt he had done wrong

stole

made love together, knowing he did

when he

not like her

44. He felt he couldn't succeed

he applied himself

he was more stable emotionally

unless

45. I used to feel 'down in the

I was younger

ever I was given the slightest chance

dumps' when

46. When they didn't invite me, I

knew it wasn't an oversight

felt rejected

47. He was most anxious about

his car

his future

48. When he found he had failed

wondered why

made arrangements to take another

the examination, he

49. A lot of people

go a long way

are slob

50. Brothers

are sometimes the best of friends

are individual people accidentally tied

to their siblings by birth

51. After they knocked him down, he wept
got up
52. Most of all I want a raise
is a beautiful love
53. My sexual desires are normal, I guess
are quite frequent
54. His conscience bothered him most when he knew he lied
he lied
55. He felt he could murder a man who shot his friend
deliberately misrepresented a known situation
56. At times he worried about pimples
money
57. He did a poor job because he wasn't equipped for it
he was over-anxious
58. Most marriages last more than three months
are not "made in heaven"
59. While he was speaking to me I picked my nose
became aware of his nervousness
60. My mother is getting along in years
is a cold, old woman
61. Sexual intercourse is satisfying
is the height of physical pleasure
62. Responsibility is a challenge
is a normal duty
63. Whenever he does below average work, he starts studying
feels like an ass
64. He felt blue when it rained for the whole week
he had no one to go out with
65. I felt most dissatisfied when the cat threw up twice
he didn't understand how he felt about something
66. When I meet people, I generally feel interested
anxious
67. My first reaction to her was sexual eagerness
felt that I could do the job
68. When they put me in charge, I improved the system
being in analysis sometimes
69. I feel guilty about nothing in particular

*Dick**Tom*

- 70 When my father came home, I poured him a beer
 71 As she spoke to him, he knew this was not "it"
 72. When he was punished by his mother, he thought "the hell with her"
 73. People in authority are not always competent
 74. I feel happiest when I have a nice sunny weekend with people I like
 75 He boiled up when she insulted him
 76 When my mother came home, I opened the door for her
 77. When they told him what to do, he did it
 78. After a year of marriage, he had had it
 79 His greatest worry was money
 80 When he got a spanking from his father, he thought "the hell with him"
 81. Most women act as though they were lonely much of the time
 82. When I feel that others don't like me, I leave gracefully
 83. More than anything else he needed a pair of shoes
 84 Most people are all right

• Unanswered

felt depressed
 listened and answered
 felt very insulted
 just people
 I am with someone I like
 •
 felt depressed
 did it
 had spermed a child
 himself
 felt like hitting back
 they don't know whether or not to
 "like" sex
 I feel depressed
 love
 unchangeable

85. When his turn came to speak, did
lie
 86. I could lose my temper if I tried
 87. I am afraid of rats
 88. Whenever he was with his nothing particular
father, he felt
 89. A man would be justified in flushed her baby down the toilet
beating a woman who
 90. When they told him to get got out
 91. Sometimes I feel that my boss is simple-minded
 92. When I think of marriage I feel it's not for me
 93. Whenever he is introduced to forgets their names right away
people, he
 94. When he was with his mother, like leaving
he felt
 95. Most men act as though they were something special
 96. Fathers conceive children
 97. He felt inferior when he realized he was only 4'9"
 98. If I were king, I would abolish certain laws
 99. Mothers are too concerned with that fact
 100. I feel sad about Eisenhower
- almost shit in his pants
- I felt there was provocation showing my feelings uncomfortable
- enjoyed being beaten
- got out
- is very lazy and uninterested in his work
- I think of someone I don't know yet feels embarrassed
- bored
- they knew instinctively what innate rights they have
- are people
- he was accused of something he wouldn't even think of doing
- create a parliament based on a constitution
- are sometimes pregnant being psychologically handicapped

SENTENCE COMPLETION TEST

RE EVALUATION (1959)

*Dick**Tom*

- | | | |
|--|----------------------------|---|
| 1. When he was completely on his own, he | was happy | was lonely |
| 2. He often wished he could | own a car | swim |
| 3. It looked impossible, so he | saved and bought one | went home |
| 4. He felt to blame when | he hit the garage door | the postman fell over the roller skates |
| 5. When she refused him, he | was sort of sorry | persuaded her |
| 6. I used to feel I was being held back by | not having enough money | my brother |
| 7. He felt proud that he | made it | could play the piano |
| 8. As a child my greatest fear was | nightmares | of my parents |
| 9. His father always | ate well | failed to make his position clear or rational |
| 10. Men | are preferable to me | .Women |
| 11. A person who falls in love | is very fortunate | should get married |
| 12. I was most depressed when | he left me | I was single |
| 13. My first reaction to him was | love and respect | surprise |
| 14. When she turned me down, I | was glad | felt bad |
| 15. His new neighbors were | pleasant | noisy |
| 16. Most fathers | do their best | are older |
| 17. Sometimes he wished he | could buy a home right now | could fly |
| 18. Usually he felt that sex | was marvelous | was necessary |

- | | | |
|---|---------------------------------|--------------------------------|
| 19. I could hate a person who | is sloppy | lies |
| 20. His earliest memory of his mother was | dim | blurred |
| 21. When I meet a woman, I | say hello | look her up and down |
| 22. When people make fun of him, he | enjoys it to a point | gets red in the face |
| 23. When he met his boss, he | said hello | considers it a minor challenge |
| 24. When I think back, I am | I said that of him | I was so neurotic |
| 25. If I think the job is too hard | have a go at it anyhow | don't do it |
| 26. Sisters | are nice | -brothers |
| 27. He felt his lack of success was | failure | lack of interest |
| 28. When they talked about sex, I | perked up my ears | listened |
| 29. I used to day dream about | being powerful | screwing |
| 30. Most men | are good | are interested in women |
| 31. When I have to make a deci- | make it | think |
| 32. Love is | marvelous | good |
| 33. My earliest memory of my father | is dim | was blurred |
| 34. I was most annoyed when | he kicked the dog | my father was intimidating me |
| 35. Most mothers | do as well as they can, I guess | are big |
| 36. Taking orders | is necessary | is one of the facts of life |

Tom

do nothing
are generally good, at least under
standable
are attractive between 16 and 35
went to sleep
get annoyed
take it and think of an answer
drank too much and woke up with a
hangover
he tried hard

I was in my teens

felt left out
saving money
got stewed

read newspapers
sisters
cried

to get my wife pregnant after we get a
home
are alert

Dick

be tired
are generally all right
are not sexually appealing to me
felt good
do without
am not overjoyed
stole

he got a break

it rained

was sorry
his raise
knew he'd have to take the course
over

work hard
are fun to have
stayed put and they left

to be reasonably happy

are fulfilled

37 I dislike to
38 I feel that people

39 Most women
40 After he made love to her he
41 If I can't get what I want I
42 When I am criticized, I
43 He felt he had done wrong
when he

44 He felt he couldn't succeed
unless

45 I used to feel down in the
dumps when

46 When they didn't invite me, I
47 He was most anxious about
48 When he found he had failed
the examination, he

49 A lot of people
50 Brothers

51 After they knocked him
down, he

52 Most of all I want

53 My sexual desires

54. His conscience bothered him he did something wrong
 most when
 55. He felt he could murder a man who killed one he loved
 money
 56. At times he worried about he wasn't up to it
 57. He did a poor job because depend on love and respect
 58. Most marriages
 59. While he was speaking to me, I thought of something else
 is seventy three years old
 60. My mother is great
 61. Sexual intercourse is something to be proud of
 62. Responsibility is unhappy
 63. Whenever he does below average work, he
 64. He felt blue when it rained
 65. I felt most dissatisfied when the meal was cold
 66. When I meet people, I generally feel interested
 67. My first reaction to her was positive
 68. When they put me in charge I did all right
 69. I feel guilty about . no I don't
 70. When my father came home, I gave him a big hug
 71. As she spoke to him, he knew where they stood
 72. When he was punished by was angry
 his mother, he
- he was lazy
 was cruel
 myself
 he wasn't interested
 are happy or at least are what you make them
 looked at him
 is very neurotic
 is fun
 is a good thing
 feels guilty
 it rained
 I thought I'd never get a raise
 interested
 one of desire
 was glad
 nothing I can think of anymore
 felt apprehensive
 listened
 felt sad and angry

- | | <i>Dick</i> | <i>Tom</i> |
|--|---|-----------------------------------|
| 73. People in authority are | not as bad as they are sometimes made to appear | the ones to get things done |
| 74. I feel happiest when | I am home | I'm at home with Fay |
| 75. He boiled up when | he said that | he saw the waste of time |
| 76. When my mother came home, I helped her up the stairs | I helped her up the stairs | thought it's only for the weekend |
| 77. When they told him what to do, he | did it | did it |
| 78. After a year of marriage, he | knew it would last | felt delighted |
| 79. His greatest worry was | money | money |
| 80. When he got the spanking from his father, he | was angry | got mad as hell |
| 81. Most women act as though | they were the nuts | they were more delicate than men |
| 82. When I feel that others don't like me, | I have to put up with it | I try to get them to like me |
| 83. More than anything else he needed | a raincoat | sleep |
| 84. Most people are | all right | all right |
| 85. When his turn came to speak, he | did | spoke |
| 86. I could lose my temper if | I didn't have reasonable control | I wanted to sometimes |
| 87. I am afraid of | guns | losing my temper |
| 88. Whenever he was with his father, he felt | more comfortable than before | uncomfortable |

- | | | |
|---|---|---|
| 89. A man would be justified in beating a woman who | (I don't believe in beating people) | beat him first |
| 90. When they told him to get out, he | left | got out |
| 91. Sometimes I feel that my boss | is good at his job | is incompetent |
| 92. When I think of marriage | I think I've had it just as good, if not better, in many respects | I feel delighted |
| 93. Whenever he is introduced to people, he | * | is interested |
| 94. When he was with his mother, he felt | better as time went on | uncomfortable |
| 95. Most men act as though | they did their best | they knew more or less what they're doing |
| 96. Fathers | are necessary | are often neurotic, like mothers |
| 97. He felt inferior when | he saw better-built persons | he felt blue |
| 98. If I were king, I would | hardly know how to handle the job | go horseback riding a lot |
| 99. Mothers | are necessary | (See 96) |
| 100. I feel sad about | the East-West problem | almost nothing anymore |

*Unanswered

- | | <i>Dick</i> | <i>Tom</i> |
|--|---|-----------------------------------|
| 73. People in authority are | not as bad as they are sometimes made to appear | the ones to get things done |
| 74. I feel happiest when | I am home | I'm at home with Fay |
| 75. He boiled up when | he said that | he saw the waste of time |
| 76. When my mother came home, I helped her up the stairs | I helped her up the stairs | thought it's only for the weekend |
| 77. When they told him what to do, he | did it | did it |
| 78. After a year of marriage, he | knew it would last | felt delighted |
| 79. His greatest worry was | money | money |
| 80. When he got the spanking from his father, he | was angry | got mad as hell |
| 81. Most women act as though | they were the nuts | they were more delicate than men |
| 82. When I feel that others don't like me, | I have to put up with it | I try to get them to like me |
| 83. More than anything else he needed | a raincoat | sleep |
| 84. Most people are | all right | all right |
| 85. When his turn came to speak, he | did | spoke |
| 86. I could lose my temper if | I didn't have reasonable control | I wanted to sometimes |
| 87. I am afraid of | guns | losing my temper |
| 88. Whenever he was with his father, he felt | more comfortable than before | uncomfortable |

the sort of rocky ground in the foreground His wife is the instrument of immortality for him she is pregnant The girl in the foreground is their daughter ready to go off to school She is a dedicated type and seems rather likely to be come a teacher She has a sort of far away look in her eyes confirming her interests in things of the mind The person in the background is perhaps the man's father In the larger sense, the picture is the symbol of human endeavor and striving to create

Card 3BM

Either a young boy or girl somewhat unhappy for having broken the toy at the left One of those numberless crises of childhood crises that are so important at the time but fade into insignificance as one matures

This is a still from a motion picture starring Linda Darnell and perhaps some latest exciting male new comer to the Silver Screen The poster in the background is supposed to be so intriguing that you go in to see the picture If you do, you will find it is not in the movie! Other wise the scene is one in which the girl wants something of the man that he is perhaps not willing to give perhaps the truth about some

Card 4

her womb and is resting in a relaxed joy, while her husband tills the furrows of the rich earth The young girl in the foreground is also a part of the mood of growth although she stands on barren rocks The books in her hand and her searching gaze appear to indicate that she is deep in thought—perhaps about something she has read Perhaps she is about to have a profound insight into the nature of her place in the world, perhaps she is in the process of growing up

This is a young person completely dejected because she is hump backed There is no happy ending to her situation because she must, per force, live in her grotesque body

This man is straining to get out of the house away from his beautiful, but cold, wife The sexually inviting female to the left on the picture symbolizes his hunger for a wild lay

THEMATIC APPERCEPTION TEST

INITIAL TESTING* (1957)

Dick

Card 1. The boy received the violin as a present—seemingly because he wanted it, judging from his rather sensitive face indicating some pre-disposition of a creative temperament. He is thinking about the possibilities of the instrument and his growing ability to realize them.

Tom

This boy has been wanting to play a musical instrument for years—ever since he could remember. His parents told him that they'd let him play a violin as soon as he got big enough to hold it properly. He is now, in the picture, sitting in front of his long-awaited gift for the first time. The immediate excitement of opening the case is over. For the first time he is with the instrument face to face, alone. Soon he'll touch the violin and examine it minutely, set it to his chin—and go through the initial pain of realizing that he can't elicit beautiful notes on it. If he gets the proper guidance, he will then begin a long, painstaking but rewarding development. If he has talent, he may become a professional violinist.

Card 2. A rather idyllic symbolic picture. The virile farmer, husband of the woman at the right, has made "by the sweat of his brow" the farm from

This is a picture of earth and birth and soil and toil, of fertility and growth. The woman leaning against the tree is feeling the child move within

*In the initial administration of the TAT, subjects were asked to write out their own responses.

not really want to shoot any animals. The night-mare, portrayed in the background, symbolizes his guilt.

This old man has just closed the eyes of his son who has died of T.B. He has stopped the upward motion of his arm to bless the dead boy.

This man has discovered his wife has died in her sleep. He is terribly grief-stricken because she is such a young woman and he had considered himself so fortunate to marry her as he is much older.

This is a young man looking out of the window of his penthouse apartment after a long party. He is looking up at the early morning sun, breathing in fresh air.

in the background is his fantasy alternating between an emergency operation and a heinous crime. He will become aware of the "unpersonal" character of "things"—tools are for use, and the uses can be manifold.

The boy has fallen asleep and his father is passing his hand over his eyes to make sure he is, before turning out the light. Why his right leg is raised so high is not very clear, perhaps he is tip-toeing in that exaggerated manner to amuse himself.

The woman has just died. She is still young and the husband's grief is emphasized by the intense presence of her firm breasts—now dead.

This wonderfully expressive picture represents the climax of any young man's growing up. There is only he and the sky and stars. All his living comes down to one person—himself. He will, of course, do many things, know many people, perhaps fall in love—but it all starts with him. All his responsibilities he assumes, of his own free will. He is at the door of life.

Card 12M.

Card 13MF.

Card 14.

incident or other They'll work it out, however, by the last reel.

Card 6BM.

The man, a friend of the family, has just had the unpleasant duty of telling the old woman that someone in her family has died. It is the moment of shock when no words are possible. The woman is so old, however, that she has known death before and will be able to sustain her loss in this instance as something inevitable . . . something that happens, like rain or snow or flowers

Card 7BM.

The old J. P. Morgan-like man is the younger one's father. He is giving him "pointers" on how-to get ahead-in business—the banker business in this case. There is an aura of conniving suggesting that the old man's fortune was amassed through cunning at the expense of others. He is molding the son in his own image . . . it is the story of paternalism in its most undesirable form.

Card 8BM.

This well dressed rich boy has been out shooting on his family's estate. He is having a daydream about the sporting gun—turning it into another instrument of destruction—a knife. The scene

This man is the foreman of the steel mill in which the old woman's son works. He has just told her the boy has been killed in an accident.

The old man, an old lecher, is advising his son who has just informed him that he has got a girl into trouble, to arrange for an abortion.

The effeminate boy in the foreground has just remembered a nightmare he had the night before. It was occasioned in anticipation of a hunting trip. The boy is by nature effete and does

ah . . . she's very pregnant and she's looking forward to it . . . to having the child. It's probably in the afternoon. The girl on the left . . . young girl, probably sixteen or seventeen; going to school and she's definitely the farmer type girl, because she has large bones. You might say peasant stock. Let's see, what's she thinking, feeling? She's probably thinking about Johnny Brown at school and she's beginning to be feminine and she'll be glad when she gets out of school at the end of the year.

This looks a little bit like a Gaugin. The form of it. Literally it's a sad picture whereas Gaugin's pictures are full of life. It's a girl, um . . . I don't know what the hell she's doing. She doesn't have much room between the thing she has her hand on and where she's sitting. She's listening for mice, let's say. (smiles) The most interesting thing about this is the form of the thing.

This is really very sexy; actually it has something to do with sex. This is probably a whore house. The reason I say that is that there's someone in

fulness of the earth which has given them the farm and the fruitfulness of the womb which has given them their children. The rocks in the foreground sort of symbolizes the harshness of nature and the field in the middle-ground shows what man can do to harness nature. I think that's all I can say about it.

This looks like a Picasso . . . sort of from the Blue Period because of the angularity of the shape. It's the figure of a woman and she's very unhappy; but I don't know what she's unhappy about. (pause) There's something beside the bench, the upholstered bench she's leaning on. I don't know what it looks like but maybe someone burned a hole in her carpet. (smiling) Well, I think if she'll just get up and try to get used to the hole in the carpet and lose about ten pounds around the hips she'll be all right.

The woman at the right looks like Linda Darnell and this sort of looks like a still from a movie that they would have outside a movie house.

Card 3BM.

Card 4.

Dick

Card 1.

This boy had a birthday recently and he got this violin as a present and he's thinking about it. It's going to be pretty tough for him to master it because he looks pretty young and that violin looks like a full size violin. If they'd given him a three-quarter size violin it wouldn't be as hard to learn to master it. But anyhow, he's going to learn to play it and he'll be very good at it . . . and he'll have a successful career as a violinist

Tom

I've seen this before. This is a young boy. He looks very much like Yehudi Menuhin and he's ah . . . actually what he's doing is looking at his father's violin and he's looking at it and sort of hearing in his head how a violin sounds and he's enchanted with it and he's thinking: "Boy, maybe someday I'm going to play the violin. I already look like Yehudi Menuhin." (laughs)

Card 2.

This is a symbolic sort of painting. The family in the picture owns the farm. The father's in the background plowing and his son is in the foreground plowing. The woman at the right is the father's wife and she's pregnant and she's thinking about being pregnant and she's even a little amazed at being pregnant because she's in her early forties. The girl on the left is her daughter and she's going off to school. She might even be the school teacher and the symbolism is the fruit-

This is a very ripe fruitful picture and really it's almost like a poster for Iowa or Oklahoma or something like that. Like Iowa is the womb of America. The earth looks rich. There's some rock in the foreground. The man looks like he can handle his job. The woman on the right leaning against the tree, is pregnant and she's holding her hand on her stomach and probably feels very attuned to her being pregnant; bearing fruit. Her breasts are full; she's probably,

*The responses obtained in the re evaluation were recorded verbatim by Miss Miriam Asher.

side and the old man's some, I don't know . . . corrupt politician and he's telling the young man, "All you've got to do . . ." whatever he has to do and the young man's going to say, "O K." So it looks as though the young man is going to do some dirty job for the old fellow.

I think this thing in the background could represent the boy's thoughts or dreams. On the other hand, I notice this gun here and it could be that this boy has shot his pal by mistake while hunting or something and now he's thinking how his pal is going to have to be operated on and have the slugs taken out.

The kid could be dead and the man, maybe his father, is just closing his eyes or is blessing him. Or the kid could be asleep and his father or whoever he lives with is about to wake him up. I

savory facts about corporate strategies. The young man doesn't like what he's being told. So he's going to think about it for a couple of days and then he'll realize that J. P. Morgan is pretty old and he'll probably die pretty soon and then the young man can handle things the way he thinks best and more honorable.

This is a nightmare picture. The boy in the foreground is well dressed, he goes to a private school and he has a rifle with which he went hunting the day before. During the night he had a dream about his hunting which turned into a nightmare. He thought he dreamt that he had shot someone and in his dream the someone turned out to be himself. He dreamt that he was carried into an operating room and the surgeon cut into him to remove the bullet without giving him an anesthetic. At that point he woke up and now we see him the following day thinking about the dream. You must get writer's cramp writing all that (laughs).

Oh dear, this is a very sad picture (pause). The old man is the grandfather of the boy lying on the couch. The boy has died and the grandfather has just closed his eyes. End of story.

Card 8BM

Card 12M

(pause) And on the wall in the back is good old Paulette Goddard and she's the other woman in the triangle. If it is a triangle, why would he have her picture up when his girl friend was around? Maybe he just likes sexy calendars. Anyhow, Linda Darnell is trying to make him change his mind and he's having a hard time trying to decide what to do. But I'm sure it'll turn out all right because movies usually do.

Inquiry—(Trying to change his mind? decide?) I don't know, didn't have anything specific in mind. If it's a movie then it's something about the picture of the girl in the background.

Card 6BM.

The man is the woman's son and she's in a state of shock because he's had to tell her that her husband just had a heart attack and died. She either is going to adjust to this fact or else the loss will make her waste away and die also. But at the present moment she's quite immobilized and we can't tell how she's going to react in the long run.

Card 7BM.

The man, the older man looks like J. P. Morgan. (pause) He's just told the young man some un-

the background showing a thigh and this particular girl is trying to get this man and he's got his eye on one of the other girls. On the other hand, the thing looks like a poster for a movie. They look a little bit like movie people drawn on a poster, idealized faces . . . The girl in the foreground could be Linda Darnell and the other figure could be Rory Calhoun or someone like that.

I remember this from the last time and it has the same effect now. It looks like someone who's come in who is bringing bad news to this old lady standing by the window. It could be about an accident . . . about her son . . . could be, on the other hand, the woman's son and he could be saying, "Mum, I met a girl."

The young man looks very cynical and the old man looks, ah . . . he, too, looks on the shady

No. 8BM, No. 13MF

No. 8BM: Because of this boy's belly being opened: A knife. I don't like that idea. The boy in the foreground looks morbid. There's a suggestion of pain and it's not a pleasant picture in that sense.

No. 13MF: First of all it's very startling. It seems to be against sense. You have a woman, well-formed and lying in bed and the man standing, apparently very unhappy. Either the woman is a corpse or the man is out of his mind. I guess this picture could have all kinds of implications. What do you call having relations with someone who is dead? Oh yes, necrophilia. This picture leads to madness and necrophilia.

Least Liked: No. 12M, No. 3BM

No. 12M: Death is not terribly appealing. That's why I don't like this one.

No. 3BM: And this sort of unhappiness isn't appealing. It's sad. She's got problems, whatever they may be and here at the moment she doesn't seem to have very much of a will to do anything about them.

*Dick**Tom*

don't have to go on and on if it really doesn't interest me that much?

Card 13MF. This responsible family man is out of town at a convention. He picked up the girl for the night and now he's getting up in the morning with a terrible hangover. The girl is still asleep but he has to get up to go to a meeting

The attitude of the man looks as though he's in pain or in sorrow. And the woman is lying on the bed with her breasts exposed. Perhaps the woman is dead for otherwise he wouldn't feel sorrow or look like he was in great pain. That's about it.

Card 14. This is a picture full of promise. This boy left home to go to the big city and now he has a place of his own. It is nighttime. He's looking at the sky and he feels full of wonder and ambition and he feels like he's going to conquer the world.

It's dark outside and we're looking in. Oh no, wait a minute. It's light outside and he's inside looking out. He's opening the window; it's early morning and he's getting a breath of fresh air; looking at the rising sun and he's saying, "Ah, Saturday morning. We've got the whole week-end."

Best Liked: No. 14, No. 2

The basicness of each one, I would say. (basicness?) They contain a lot of solid reality, of living. This one (No. 14) is sort of the striving after whatever one wants to do and this one (No. 2) is a sense of fulfillment; just fruitfulness of living, it's bursting with life.

No. 2, No. 14

No. 2: Everybody seems so happy and everything is fruitful and nature is working well and that sort of thing.

No. 14: This one because it's very simple and there is something that appeals to me in looking out a window. Especially if you don't have to go to work in the morning and don't live in the city.

Wings, head, body. Could continue on down, especially eagles.

> Doesn't look like much of anything.

^ 6. This part here, if you consider it separately, looks like wings.

> Think that's about all I can see.

v 7. Of course, this way looks like Jap gate structure, things they have above gate.

(W) Just the design.

I think that exhausts the possibilities.

Card II. 3"

1. This suggests clowns to me or dancing bears. Rather theatrical-like, connected with the stage.

(W) Whole image, although this doesn't properly belong. Funny hats on, faces hidden. (Bears are D—"without heads"—not usual P)

2. These two things could be feet. You know, bottom of a person jumping up.

(D) Grotesque feet, this skin color, going into socks you walk around in. In which case this all (W) could be pantaloons.

3"

1. This looks to me like two carnival characters having a dance. Thing has a brighter, happier feeling than the other card.

(W) Like clowns. Costume, black, and red feet and red cap.

2. Oh, then I see two buffalo heads or . . . yeah —something like that, looking towards each other.

(Usual animal heads) Ears, noses. Just imagine the eyes, beginning of shoulders and foreleg.

RORSCHACH TEST

INITIAL TESTING (1957)

Dick

Tom

Card I. 4"

3"

1. Well, it might be some fantastic bat in flight, like from Fantasia.

(W) Wings, body, up here not very clear.
Idea of a bat.

2. It might be some sort of . . . not terribly good . . . scenic design. Two female figures with head sticking up in middle and arm raised. Sort of back to back.

(W) Leaning back to back, heads, breasts, arms raised, skirts here.

3. This way looks rather like a Jap mask.

(WS) When you wear it, pull the parts together. Eyes here. These openings just for kicks.

4. Also looks sort of skeletal, lower pelvic region, with the spine going up.

This definitely pelvic, this the spine. (pointing) Shape.

5. This part here looks like heraldic part of emblem—sort of like an eagle wings incomplete.

1. First I see a butterfly.

(W) Two symmetrical wings, thing looks very symmetrical, tail, and top part of the head.

2. And then I see a torn moth rather than a butterfly.

Same shape—started to look more like a moth when I thought of colors and holes.

Mutilated moth, grey and the night. Really more of a moth than a butterfly.

3. And I see outline of a person, the buttocks, definitely a woman.

Hips, legs, up here breast outline. That's where this stops.

4. Top part could be a crab. Some part of a crab. Claws reaching up.

(D) Just claws.

8 We deal in sex symbols, too, don't we? This is possibly a vagina down here and this would be the womb (S) Then if you take this as a vagina, have to discount these things (red D extensions)

(DS) Sex This looks like clitoris, further in the vaginal passage, space in back (S) of it supports vaginal idea That's about it

3"

1 They look like two Negroes, couple of bowling balls in each hand, in dress suits (D) Heads, necks, and chests, hips, leg Dressed up formally Negroid shape head -thick lips, Congo long heads, sort of formal stance, dance (?) Men

2 Two red blobs look like a couple parrots up side down tails up, heads down

(D) Primarily shape, partly the color

3 Middle looks like a lung, picture of a lung (D) Looks like blood I guess it looks like pictures of lungs I've seen Spongy bloody tissue Shape of lungs

Card III 2'

1 Well first thing looks like thing Marcel Marceau does, the pantomimist Butterfly in the middle He does a scene like that Looks like two figures—it would be very symmetrical of course

(W) (Usual humans) Maybe holding something Wings and center Men

2 Thing in middle could also be a bow (D) General impression of a bow knot in middle

3 Could also be a type of Italian spaghetti only of course it's red (same bow)

Sort of dance formal dance (two people above)

Dick

3. This part looks sort of like a tool. Head end of pliers.
(D) Shape.

1. Middle looks sort of like fanciful rocket ship, discharging jet propellant, has that dynamic feeling in it.

(SD) Red is the jet ejection, after blast.

- 5 Again we have an abstraction of skeletal, you know, pelvic business.

This back of the backbone, hips, just region.

6. If you made an effort, I suppose you could see sexual symbols in it but I don't know I really do, but you could read that into it.

Well, I imagine you could consider that sort of anal (S) and this the cheeks (D). I think that's all I get out of this.

Tom

3. Now this structure here looks like end of a circumcized penis to me, just that part there. Can I turn it around?

Would be circumcized, what left of the foreskin and head. Bottom view.

- > 4. Now this one looks like a little bear, one of those Australian teddy bears, but only this one—one on the right.

(D) Eyes, nose, back, legs. (not P)

5. Now this one again looks like a crustacean, some kind of a star fish, something at bottom of sea.

(D) Edges coming out, protrusions and the color. (?) Combination of both. (?) Think the shape.

6. Maybe sort of coral or . . .
Same area. Color most important.

7. I get some sort of turkey image now that looks like it, red heads, black bodies.
(W) Black bodies, red heads, comb on top.

2. Fanciful animal shape with the head and wings and tail. Sort of a backbone.
(W) Bat-like with sort of a dragon head.
Backbone structure. (Fc)
2. See a colonial hat on top of the thing. Taking this thing separately, looks like the head of an animal, something like a . . . the deer family.
Looks dead, with the eyes open.
(D) Just lying out. Deer family. Maybe with tusks here.
3. Or like a fish, maybe a dead fish.
(D) Long, imagine it would be longer than this, just head. Dead, too.
4. I see a boot and I thought it looks like Italy but not really like Italy. Italy and a boot look similar.
(D) Just looks like a boot you pull on.
5. Then this thing looks like a skin, whole thing looks like fur of some animal.
(W) Taking things as a whole, thought most of it upside down. Head (usual bot-tom) and skin. (Fc)
That's about all.

Card V. 4"

1. This is butterfly shape. Could also be a bat shape.

5"

1. Right there I see a bowler hat.
Brim and top.

Dick

- ✓ 4. Here it looks rather jolly or scary, however you want to look at it—smiling type owl-witch type of combination. Boogey man type of thing.
 (W) Big eyes, arms, wild hair, mouth (S). body. Witch goblin. Like Walt Disney in Fantasia.
- > 5. This way looks like fanciful dogs with enormous tails.
 (top D) Tails terribly long, more than usual number of legs
6. If you separate elements these two could be tree trunks.
 (D) Branches more or less.
- ✓ 7. Well, if you take these two elements, look rather like Hottentot heads.
 (D) Bottom heads Elongated skulls.

Card IV. 3"

1. Looks like one of those flat fish (edging card). Don't know what they're called.
 (W) Sort of swimming along, the whole thing.

Tom

4. These two things look like skulls.
 (D) Very Negroid looking, elongated heads.
 That's about it.

3"

1. Looks like some monster of some kind. Like some monster coming this way, at you. Feet and hair kind of body, two withery arms, withered arms, face, nose, two eyes, slit for mouth.
 (W) Legs, hairy body, grotesque.

- ✓ 2. Fanciful animal shape with the head and wings and tail. Sort of a backbone.
(W) Bat-like with sort of a dragon head.
Backbone structure. (Fc)
3. This again looks sort of clownish to me, like a clown sitting on a tree stump Enormous shoes and withered arms.
(W) (M) Looking at it more or less from ground, legs look enormous, head flat, funny long nose.
4. Again I see animal, looks sort of like a seal or sea lion with mouth open.
(D) Form.
That's all I see in it.
2. See a colonial hat on top of the thing. Taking this thing separately, looks like the head of an animal, something like a . . . the deer family. Looks dead, with the eyes open.
(D) Just lying out. Deer family. Maybe with tusks here.
3. Or like a fish, maybe a dead fish.
(D) Long, imagine it would be longer than this, just head. Dead, too.
4. I see a boot and I thought it looks like Italy but not really like Italy. Italy and a boot look similar.
(D) Just looks like a boot you pull on.
5. Then this thing looks like a skin, whole thing looks like fur of some animal.
(W) Taking things as a whole, thought most of it upside down. Head (usual bottom) and skin. (Fc)
That's about all.

Card V. 4"

5"

- ✓ 1. This is butterfly shape. Could also be a bat shape.
1. Right there I see a bowler hat.
Brim and top.

Dick

(W) Butterfly this way ^, bat this way V.

2. Two terribly indistinct individuals leaning against something in the middle.

(W) Legs, body, heads really not there. Feeling of leaning. (?) No. (man or woman?) Either.

Tom

Don't see much in this.

- 2 I get a center of gravity at the middle of it and then I can imagine someone swinging the other objects around. Someone standing in the middle and he's got these objects and he's whirling them around.

(W) This the center, maybe this could be a man, swinging things around.

(Add: Now I see possibly two little faces. Also, something like a vulture, big wing span.)

That's about it.

3. Part of it could be a view from the air of a lake.

(W) From top without appendages. River runs through it.

- > 4. Again if you neglect that, looks like a root or vegetable growing in the ground, like a funny-shaped potato.

(W) Root hairs. Just the root, cut off where it comes out of ground.

Card VI. 7"

1. If it were in color, could be a lovely crystal formation. Could be something under a microscope, blob of protoplasm.

6"

1. This looks like a canal, an air photograph of a valley, very straight canal in center, black part denotes cliffs, white part like high moun-

tains.
(center D)
2 Top of it looks like a totem, some kind of a totem of an animal.
(D) Top with feathers stuck on totem.

3 That's about all, see a different object in here, black object, pretty symmetrical, could be a mace or something, ceremonial part of office.
(center of top D) Made out of wood or gold. Mace of office

(D) Symmetrical in every way.

2. Base has looks to suggest texture of wood
Could be base to those Indian . . . what are they . . . totem.

(D) Has very much the feel of wood without bark on—stripped wood or driftwood.
This, the totem. Shape gave me idea of totem.

✓ 3. Could be an imaginary flying animal coming out of its imaginary cocoon In which case, animal could have four whiskers and two eyes and little dent on top of head.

(W)

4. If you take everything away and just look at center shape, looks rather rectal

The slit which becomes progressively darker as it goes on

5 This way looks like symbol a court jester might carry—court jester figure—funny headaddress
(W) Handle, eyes here, head coming out.
(Jester head on a handle)

I think that's all on this one

Card VII. 7"

5"

1 Looks like sort of a land, sort of a map, two 1 Looks like two people looking at each other.

Dick

identical peninsulas jutting out Design for an airport with just landing area mapped out

(WS) This is water (S)

- ✓ 2 Looks like a Klee Drawing Sort of whimsical humor cause it looks like figures jumping up and down hands extended and legs down here
- Legs arms enormous head tiny eyes If you pulled this together or filled it out you d get more of the figure
- ∧ 3 Then it looks sort of like a crab with its insides out just shell like stuff left

(W) Form

- > 4 This looks like a toy dog that's been rather the worse for use
- Head body legs Arms gone

- < 5 This could also be Scotties Scotty dogs
- (D) Shape of head and long hair hanging on them

- 6 These could be elephant heads
(middle D) Shape

- ✓ 7 And total thing archeological remnant of a

Tom

- (D) (P) One could be a man and one a woman

- 2 Could be two chairs, too That's the back of it
(D)

- 3 This looks like an anus
(bottom center D) Taking it head on

- ✓ 4 This could be a spring of some kind rocks here and a spring coming out of it This water

(D) Rocks water coming up filling up hole

- ✓ 5 Could be a bullet right in here coming out, end of a gun

(D) (m) Looks like end of gun, projectile coming out

figure, a female figure.

(W) Head gone. Leg, body, behind, head gone. Feminine grace to it.

That's all I get out of this one.

Card VIII. 6"

> V 1. That's pretty, pretty pastels. That's sort of a flower. This part sort of thistley, with flower opening above it.

(W) Flower. (CF)

> 2. This could be a primitive animal getting from one rock shape to another.

(FM) Like a prototype of a dog (P)

3. This could be a bird with two eyes and beak although this bird is dressed in a fur jacket.

(D) (Fc) Orange and pink. Looks funny cause like a fur jacket. Quality of fur.

That's all.

Card IX. Course that's pretty too, same colors as last one.

9"

V 1. This way looks rather atomic, famous mushroom cloud on top, looks as though coming out of a volcano.

3"

1. Looks like two chipmunks climbing up a tree.
(D, FM)

2. I like the color in this. Looks very geological to me—have below the earth, closer to the earth and a tree growing out at the top.

(W) Could take as a whole but not thinking of it. Shape of a pine tree.
That's all.

5"

1. Oh, this looks very fantastic, like something out of a fairy story. These look like two dragons. This looks like a fountain in the middle

Dick

(D) (Fm) Exploded down here, exploded up there

- 2 In the middle see sort of a petrified goat shape, billy goat with whiskers, the head anyhow.
(D) Looks like in rock, surrounding area like rock.
3. And again, archeologically this looks like sort of a very primitive man head or from later period like a shrunken head.
(D) (usual heads) Texture.
- 4 This part looks like way Canada is, maybe color reminds me of a map. But shape is little way like eastern part of Canada. But the thing as a whole is sort of an atomic symbol to me.
(D, green)
And that's that.

Card X. 8"

1. All looks like little organisms Caterpillars at the bottom.
(D) Shape and green.

Tom

between them.

- (W) Image (orange), eyes, nose, mouth.
Water. See water coming up here, refraction like water looks thinner here. Comes up as one stream here. Coming out of deep earth. (Fm) Very deep.
2. This looks like an atomic mushroom here, cloud part here.
(usual D) Cloud, bursts out.
I don't see too much in these.

7"

1. This looks like a sea scene—all kinds of shells, and seaweed.
(blue) Seaweed, jelly like substances.

2. Brueghel-like figures up here--imaginary animals.
(top D area)
3. Here's what I'd like a Mexican jumping bean to look like but it doesn't.
(top green area) Shape.
4. And these two look like flying mice.
(FM)
5. And these two look like star fish.
(D, blue area)
All look as if they're going up into the center--all the animals.
6. This looks like . . . on flowers . . . the stems, the things that hold the pollen where the bees come.
(D, orange) Pollen on it--only two of these.
7. This looks like legs sticking in the mud.
(blue in red) Legs pulling in mud.
8. A nice design--middle thing could also be a mask of some sort carrying out the human
2. These two look like little horses, brown things taking off at great speed, front feet flying.
3. These look like almost human images, blowing up something like that, maybe a life belt.
(M) Blowing this up, almost like goat skins.
4. These look like two little people from Mars. little antennae on heads, arguing with each other.
(D) (M)
(D) (FM)
5. These two look like bulls, taking off upwards.
6. And these two look like two caterpillars.
(D, top green)
7. And back of that looks like a rabbit, ears sticking up.
(D) (F)
8. And these two could be lions, yellow things.
(D) (F)

Dick

characteristics Has two eyes, internal bridge
work of nose teeny mouth here

(DS, blue for eyes, orange for nose)

V 9

A very interesting one A miniature Eskimo
floating down with huge bolts of cloth waving
in the breeze

(M) One of those parkas on, white fur
And that's all I see in that

Tom

9 And this looks like part of a wind measure
ment, goes around and measures wind

(D)

I think this is the prettiest of them

RORSCHACH TEST

RE EVALUATION (1959)

Dick

Tom

Is this the Rorschach again? Good!

17"

4"

1 Looks like an inkblot (smiles) It looks like some sort of a ballet to me and in the center are two female figures, back to back with their right or left hand raised above their heads And the large fan shaped thing in front of them is some sort of curtain and they're doing some sort of stately dance in back of it

(WS) These are the figures here with hands raised hands raised, heads (Why female?) The breast here and the skirt In back of this curtain that has holes in it doing a dance in back of it

1 That might be a moth with the feelers in the middle on the top and two little claw like things The things a moth 'cause it's not in color and it doesn't look like a butterfly but it's the same general shape

(W) Well, the fact there are two wings here, things that look like wings In the middle, appear to be feelers I associate that with winged things, like butterflies and moth Color whitish color like a moth Moths are colorless maybe have color if you look at them under a microscope If it had been a color, then more like a butterfly to me

2 And the thing as a whole could also become sort of mask

(WS) The whole thing The eye slits This could be tie around the back (side D)

2 Now looking at just the middle segment of it, the stem of it the bottom could look like feet and the legs go up and then as you advance further up, you have the thighs, and it almost looks like part of a human body Say

Card I

behind a shower curtain, behind some transparent curtain of some kind.

(W, usual human) Shrouded by a curtain.

Feet down here, calf, thigh, hips. (?)

Looks like a woman. (?) Curvaceousness

and with the thighs. Looking at a woman

from the back incidentally, not facing

you, and she'd be nude.

3. Now, if you look at just the top of it, the top part, and you more or less disregard what I called feelers before, then you could regard it as a river bed or something like that with steep slopes on the side.

(DdS) Have to cut this out (top side S).

Picture of a river bed, river would flow all through here, and this would be the sides of it.

That's about it.

3. If you hold it sideways, the end looks a little like a map of India spilling onto India and China.

(side D) It's here. (outline) (?) This shape, which is India.

I think that's all I see on this one.

- $\vee > \wedge \vee$ 4. And upside down it looks a little like a Klee (K-L-E-E) figure—a little man with his arms stretched out.

(W) The whole thing, really. (Points) Arms (side D), legs, the head, these are the eyes (top S), distorted sort of nostril

forms (bottom S).

5. This part, the nodules at the bottom, in an upside down position, look like some parts of an insect.

This looks like sort of their hands, sort of lobster, any little insect.

6. Boy, the longer you look at it, the more things you see in it. Again upside down, the central column like, looks like . . . well, don't know what it is . . . an eagle without any feathers on or something like that.

Eagle without any feathers on it. Head, very emblematic type eagle. (?) Like a coat of arms-type eagle. (?) I suppose the head, the way the head's turned, just the flatness looking of it.

Card II. 2"

1. Dancing bears, two dancing bears.

(W) The heads are not very well defined and their paws are touching (?) The general bulky shape and sort of looks like a fur texture, you know. Sort of a playful clumsiness about them that I think looks like bears.

12"

1. I think the last time they looked like two clowns dancing and this time they look like the same thing. The red upper part being the head with funny caps on and the lower parts go into the feet. Clapping hands.

(W) The whole thing. Heads, hands, arms coming together, feet. (usual clowns) In baggy clothes (?) Men clowns. Well, I

- ✓ 2. Upside down looks like sort of flying prehistoric bird with a very small head . . . (long delay)

(D) Looks like a bird head (middle D) and the shape looks like some sort of wing formation. (?) Shape like out stretched wings.

3. Upside down, the top red part looks like the skeleton of some sort of goat or gazelle, with the horns sticking up

Skeleton of a goat or a deer with two horns, skeletal face and there are the horns. (?) I don't know, looks like . . . bone like thin face, like some gazelle or goats have. It's completely bilateral, would you say?

4. And again upside down, the bottom two red things look like clown's feet.

Front part, like sort of floppy big feet, sort of standing on its toes almost. In red shoes or containers. Feet coming out—

don't know of any women clowns. Clowns are generally men.

2. Then I see distinctly two bulls' heads or two calves' heads. You know, two heads of the beef family. If you take away the red part on the top, the ears would be on the side.

(D) That's very distinct. Take these things out. Head, neck, eyes, snout, chin part, coming into the body down here.

3. And you'd have to disregard the middle section although this would be where their tongues were if their tongues were hanging out. Would have to take that part away. Bulls' tongues aren't formed that way.

(Disregarding S) Reason I said clowns rather than priests is that the red makes them look happy or like dancing, like something is going on.
That's it.

white area here, flesh colored.
I think that's it.

Card III. 2"

1. That's again a sort of ballet bit, with two . . . well, I don't know, could be men, could be women . . . they look African.

(usual H) These are the figures. Looks like African heads, sort of elongated. Could be women if these are breasts or could be loose jackets in front which would make them men.

2. In the middle is a butterfly or bow tie . . . sort of hanging there, floating there between them in the background. Could be a butterfly or bow tie or piece of macaroni. They're holding some sort of prop between them.

The wings made it look like a butterfly.

Center thing tied something like a bow.

Or like a piece of that shelled macaroni-like.

3. And if it is an African ballet, the prop could be sort of a witch-doctor thing. The red blobs on the right and left are just decorative designs.

(middle D) Like a stool . . . something

5"

1. This looks like two fellows, each holding a bowling ball.
(usual H) Here are the two fellows. Bowling balls down here.

2. The two red items on the upper extremity of the picture look like parrots upside down, heads showing. They're feathery and they have a long tail. Like parrots upside down.

Inverted, hanging from their tail, head, tails—feathery things. (?) Shape, think the color has something to do with it too. Parrots are bright colored—different colors but mostly red feathers.

3. The middle part, the red part, reminds me of a pair of lungs because they're shaped that way and because I understand lungs are made out of a soft rubbery tissue and that's what these things look like.

Dick

you carry around and dance with. Just some stage prop. Looks sort of like eyes. There's a mouth. This looks like the nose bone. You know, witch-doctor's mask or face. (side red) This would tie in the center red—be on a backdrop—decorative design.

✓ 4. Upside down, it looks like sort of hobgoblin that you might see in . . . well, it makes me think of Walt Disney's Fantasia from Night on Bald Mountain—one of those characters. (W) The whole thing. These are the arms, eyes, nose, part of the body of this one hobgoblin.

5. Ah, these sections here, upside down look like, oh, muskrats or beavers or some animal of that type.

These are muskrats or beavers. The snouts. (?) Just basically the head dissipates itself into the body and then it doesn't become that any more.

> 6. If you hold it this way, the red spots on either

Tom

(D) Thing in the middle. On the copy it's more like an x-ray but on original looks more like a lung itself. 'Cause a lung is made up of red tissue. But the thing that makes it a lung primarily is the shape of it.

4. The heads of these two guys look like . . . Negroid, like Congo long-heads. (?) Congo "long-heads," which is the tribe that binds the head at birth or later on, I believe, to make it a long shape.

Like Congo long-heads because of shape of head.

5. Now if you followed up the idea that these two people being people (and they look like people to me), then you'd say they are attired in some kind of formal dress, like an Edwardian tuxedo—in other words, a lacy shirt and like a dinner jacket.

Looks as if in formal dress, white ruffles (usual chest area) That's about it.

end look like little dogs with *enormously* long tails and being rather surprised how long they are.

(D, side red) Some sort of poodle dog. Shape. Head turning and looking at the tail. These are the legs down here.

That's all I see.

You timing it?

Card IV. 1"

1. This looks like a clown with very big feet and a little head and he's sitting on a tree stump and the view is from the ground up so you get a lot of foreshortening which makes his legs look bigger.

(W) The whole thing. These are the legs. Sitting on a tree stump. Big legs going up into the torso, little arms, like this (imitates), head.

8"

1. Now, can I interpret anything I want to into these things? Now, I've either heard or I figured out after seeing that these are supposed to be the father image of the Rorschach test, and I do remember the last time I looked at it, it seemed very threatening—you know, what's needed around here is shorthand—and it doesn't now. I recall distinctly what it looked like to me the last time I saw it and if I remember right, it was some kind of a furry monster with an 18th century military hat on. And that time I also remember seeing eyes, and a nose, and a large slit for a mouth underneath what I called his hat, his tricornered hat. Well, I don't know, I'm not coming into this fresh 'cause I recall what I saw in it the first time.

Dick

Tom

If I had not seen it before, I don't think I'd see what I see in it now. Now it looks like a rather symmetrical blob. The tentacles look like something you might see on a weeping willow, or some kind of a vine hanging down from somewhere.

(D) Of a vine or something.

But I think the thing is drawn in the way it is in order that it should or could or does lend itself to some anthropomorphic creature of some kind. Like the two bottom things look like two big feet and the tentacles could look like two skinny arms and as you go up, you could then see a head but I think that's because you expect it to follow in some way the human form, to have some of the characteristics and crudely drawn, all out of focus and so on.

(W) The beast! The eyes, the nose, the mouth, this the tricornered hat, like they wore in George Washington's day. Feet (boots) and shriveled arms. Caricature. Looks like fur, the texture of the thing.

V 2 Upside down, it looks like a flying dragon, a mythical flying dragon
Head (middle). A mythical animal, to be sure. Wings, flying.

3. The little appendages that were the arms of 3. Now the thing at the bottom here is a boar's

the clown if you look at them sideways, looks like the necks of swans, necks and heads of swans.

Black swans. (?) Look alive. I've seen them in Central Park Zoo looking like that. (?) The shape.

1. Oh, then the appendages that were the feet, if held sideways, look like seal's heads or some sort of dog's heads, barking.

Look equally like both, depends on how you're looking at them. Looks like poodle dog or seal—like not have much texture—like just flat. Looks like both.

That's all.

Card V. 3"

1. That again looks like a flying creature of some sort, maybe a big moth or a bat.

(W) More like a bat. Guess a bat has irregular wings, although I've never seen a bat but I think that's how bats look.

head, take that of context, looks as if it has the two tusks, two teeth in middle, two eyes and you're looking at the top of the head down, and it is looking up at you. Looks more like a stuffed boar than a live boar.

(middle bottom D) (?) The tusks primarily and a boar I always associate with tusks. A wild boar, two eyes, ears. (Why stuffed?) Maybe 'cause you just see the head, like looking at a tiger rug.

10"

1. This again to me has some kind of a moth or butterfly shape . . .

(W) Extended wings.

Oh, I remember very well what I saw in it the last time again. First in the center of it, like in the first picture, you get out of it, the shape

Tom

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Dick

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Head (middle) A mythical animal, to be sure. Wings flying.

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(W) Extended wings.

Oh, I remember very well what I saw in it the last time again. First in the center of it, like in the first picture, you get out of it, the shape

Dick

2. Could also look like two dancers, back to back in very fluffy big costumes

(W) Leaning against each other. Fluffy costumes These don't come into consideration (middle D extension—cutting off top and bottom extension). Whole things without these (side extensions).

Tom

as though it were behind some transparent curtain and that is the shape of a bowler hat. Now if you start with the idea of a bowler hat, then you say well there's a man and his arms are stretched out behind all this fluff, probably holding something and by there projecting them you get the idea of motion and if you put a man under this bowler hat you can think of him holding on to two things, holding on two things and swinging thing around.

(W) Here would be the bowler hat (points). Once you take this as a bowler hat you can easily assume under the hat is a man. Swinging—could be anything, got to be swinging them 'cause if not, they would be down rather than on an angle like this. So he'd have to be swinging them but what he is swinging is entirely unclear.

3. The two protuberances on the top of this hat I cannot relate to anything . . . unless you think of the things as a whole as some flying object like some moth, and those two protuberances would be large feelers, and, by the

3. Upside down it looks like a moth, too, or a bat.
(W)

same token, two things on the bottom would be two feet.

(W) The whole thing. I think that's a singularly uninteresting picture.

4. And sideways it looks like an aerial view of a lake.

(W) Rivers running into and out of them.

5. Could also look like an early design for an airplane wing.

Shape. Fuselage would go some place here.

That's all I see in that.

Card VI. 3"

1. That looks like a totem figure at the top. Like an Indian totem figure.

(D) Shape.

5"

1. Now, ah . . . top of this one looks like a totem. It looks like it could be some representation of an animal head. A weasel or something like that and just below the head, branching out, would be the feathers of a hawk or something like that, and this top would be a totem of some Indian tribe.

(top D) Very definite weasel head. They use an animal for a totem. They have feathers. Whole impression. Immediately I thought of a totem. Trayed like this. Shape of wings.

Dick

2. Bottom part looks like an animal skin that you might have in an Indian's tent. I don't know, do they have any skins in Indian tents or on the floor? Maybe some rug. Make it an animal skin. That's all I see basically—let's see what else I see.

These could be legs, arms, bilaterally.
Texture of a rug or skin. Just some animal's skin.

Tom

2. Bottom part looks like a jelly fish. The point I don't get about this picture is why there is symmetry in this, or why there is symmetrical, with the line dividing it in half. That's about it on that one.

(bottom D) (?) The texture of it, sort of like jelly, as if you'd do this (pushing in to demonstrate) on the real thing, it would push in. Then I couldn't see why there's a dividing line in the middle. That doesn't . . . jelly fish doesn't permit too much of a line in the middle. Look at it as a jelly fish would have to take out the middle line. Or like an amoeba. If you take it as an amoeba, can leave the middle line in 'cause it's in the process of splitting itself apart.

3. If you hold it sideways, it looks like a rather distorted map of the United States. You know, each half.

(D) Shape This looks like Florida; this looks like East coast. Sort of distended but basically Florida.

4. The totem top looks like it has . . . maybe

wings and the head of the *totem thing* looks like a pussycat head. Little whiskers. (long delay)

5. The center section like sort of anal to me.
(center D) The cleft and sort of like it's going in—a curvature on each side.

Card VII. 9"

1. This sort of like a crustacean of some sort. Some sort of shell fish remains that you'd find on the seashore.

(W) The whole thing. A crustacean is a shell fish of some sort, isn't it? A shell fish of some sort. If it were together, it would look like what you find on the beach. Looks shell-texture-like. Falling apart, disintegrating.

- ✓ 2. Upside down, it looks like two vaudeville ladies doing a dance, doing sort of bumps and grinds, not grinds but bumps. They have very elaborate hardos and they just wiggle their posteriors.

(W) Whole thing These are heads,

21" Do . . .

1. Can I turn these things around any way? Well, this one doesn't make any sense to me either way, any way I turn it. It could be like two heads looking at each other. Like maybe two heads carved in stone. It's been raining and there's some ice forming on the foreheads.

(D) Chiseled out of stone. Doesn't look very much like actual heads, but like sculptured, rough-hewn heads.
(?) Either one, maybe more like girls, more hair up here.

- ✓ 2. In turning the thing upside down, it might be a crosscut of part of the earth, and it's sort of a view of a volcano, shooting off steam and lava. But the thing as a whole doesn't mean very much. This thing you have to take in sections to get

Dick

trunks. Behind here. This the skirt.
These are the legs.

3. Side shapes, as such, upside down, this here looks like a lady elephant, I think.

This part of the trunk. I said lady elephant 'cause I still remember the skirt-type, Very fanciful but the head looks like an elephant. The eyes, trunk.

That's all I see in this one.

Card VIII. 10"

1. Very pretty colors. Over all, they look like an abstract design.

(?) I don't know. The pretty colors—I didn't see anything in particular, just abstracted form to me. I didn't see par-

Tom

anything out of it. If you take these as two heads looking at each other, these things don't mean anything, the two things coming up from out of the head . . . Unless they're two pony tails caught in an updraft, standing straight up.

Turn the thing upside down . . .

Heart of the volcano, coming up, like lake of lava (middle area) spray up here. Like cross section of the earth. That's about it on that,

3"

1. Well, I like the color in this one. Very pastel. The middle thing looks like a tree and the two outside things look like pink . . . let's see, what are those animals that build dams? (Beavers?) Yeah, beavers climbing up this tree

ticular objects or *what-have-you*.

—pink beavers climbing up either side of the tree. The whole thing a little frosty. Maybe that's because of the color. And, ah, sort of delicate.

(D) Shape of it, because it branches out this way. There are the two beavers climbing up. Looks very wintry. I think that's because of the color, almost looks like there's a frost on everything. Looks like a pine tree.

2. Maybe say the tree is growing up out of the ground and the bottom is sort of cross section of the ground it's growing out of. Looks like some kind of pine tree.

This would be the ground and rock (orange and red). Like ground part, cross section of roots getting water from here, from the moisture in the ground.

2. Or it could be some sort of frozen dessert, I suppose it would melt. It couldn't stand up like that.

(W) This looks like orange ice cream, this looks like strawberry ice cream, and this looks like some sort or other. Whole thing could be frozen ice dessert. Colors and textures look like ice cream.

> 3. If you hold it sideways this looks like some sort of animal, the reddish outside things, climbing, climbing from one rock to another. Some sort of badger-like or rat, or mouse . . . or otter.

(D) Furry animal, like an otter, beaver, or rat, or mouse. (?) No—if I remember what an otter looks like, I think it looks

Dick

most like what I think an otter looks like.
 4. Upside down, the shape on the top looks like a bird with heavy fur and long back and tired-looking eyes and it's balancing on its "coccyx," is that something?

Orange and red. Fanciful bird. The bird is because it's got such a beak. Beak here. (middle) Looks like fur to me, furry bird. Or it might be the abominable snowman.

5. And upside down further down it looks like sort of vertebrae

(usual D) This. (points)

6. And again, upside down, the bottom sort of blue green area could also be a bird with its wings extended. Boy, I sure see a lot of animals (laughs).

Again a bird with a very long face and very big wings. Shape of the head and the fact that it looks like wing shape.
 I think that's all I see on this one.

Card IX. 7"

1. Basically the same colors as the other one. Again the main thing is the abstract design of some sort.

Tom

2"

1. I remember this picture from the last time I looked at it, and last time I looked at it, it looked like two dragons on each side of a

- fountain and I still sort of see that . . .
 (side D) Two dragons, one and two.
 Drinking water or . . . yeah, sort of enjoying each other on either side of the fountain.
2. I'm trying to see something new in it now.
 V You turn the thing upside down the pink area looks like a cloud . . . that's as far as I got with it.
 (?) I think I'm projecting now 'cause I like to look at fountains and I think when you look at a fountain it's a nice thing to look at.
3. The things in the middle still look like a fountain to me and hard core of the water shooting up is sort of greenish and then the blue surrounding it is like a spray, like you see in fountains sometimes
 Well really it looks like an atomic cloud, with the present frame of reference. One of these mushroom clouds, Shape of it.
2. If you hold it upside down, it looks like, well, the top looks like an atom bomb could, or whole thing looks like an erupting volcano or else the atom bomb cloud. Shape looks like an ostrich feather, big fan.
 (D) Looks cloud-like. Mushroom shape and these folds like puffy, like clouds.
 The whole thing. I'm taking general views of these things. This the volcano and this the erupting bit (red), feeling of pressure. Shape and color. (?) Color has a great deal to do with it.
3. And right side up, top orange things look like some sort of laughing goblins
 These shapes, eyes, mouth, this the fanciful nose, this the fanciful ear.

Dick

most like what I think an otter looks like.

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Tom

in flowers . . . well all those things around that the bees go to, one to the other.

(orange D) I don't know what you call them, you know they're in flowers; there are lots of them.

4. Then straight up, odd-shaped creatures that look like from a Brueghel painting, all head and three little legs.

(top D) The color and the shape. Wicked little mouth, eye.

These things are horses. They're taking off.

t. At the top of the pink part I can recognize like little fantastic creatures like you might see in a comic strip—like "lead me to your leader, I'm from outer space." Growing antennae from their heads. Talking to each other in outer space language.

(top D) I'll call them Saturnians, more like creatures from outer space, half-plant, half-animal. Jabbering in outer space language to each other.

5. Got three or four feet apiece and the two blue things on the outer edge look like sort of plant life. Something like that coral life that's nourished by the sea.

(side bottom D) Sea scene to begin with, sea shells.

6. And the two brown things at the bottom could be sea shells, large sea shells. They don't look too much like sea shells. A very animated thing. Most animated picture of all of them.

5. To the left of that are two green shapes that look like the cow that jumped over the moon. (green) Jumping, front legs here, back legs, pushing itself up.

6. And to the left of that the blue areas look like some fantastic octopus, octopi? octopuses? Or put ink spots!
(D)

(outlines core of fountain and spray)
That s that

- 4 Oli I see a goat s head in it if you hold it side ways Sort of a greyish outline of a goat s head and neck and a little beard

(D) Shape

I think that s all I see

Card X 8"

- 1 Hin bottom the green things are two dancing caterpillars

Bottom green Looks like wiggling, standing on end, and sort of wiggling (?)
Color

- 2 And the green where it meets that could look like a squirrel head with dark green eyes, white nose and very long ears
(usual rabbit s head) Just the light green and the eyes are dark green, nose, mouth, ears, or horns

- 3 And then going straight up, two orange green things look like flower pods no, not pods what do you call em? You know what s

5'

- 1 This is very nice I remember this too, from the last time It looks like sea shapes—like seaweed and crabs and things like that
Seaweed—bottom green

- 2 The middle part of it I don t see as anything connected with the sea though I might have before, the large pink areas But I like this—nice and colorful

Crabs—blue At first I thought of these as crabs Later, I thought of these as seaweed It louses things when you take away color

- 3 And all kinds of little animals seem to be busy in it Like the two brown parts look like very enthusiastic horses taking off

Really movement in the thing.

Like conch shell but very successful in this form, like they have little tongue on the top. This one looks more like it than this one.

That's about it.

Add: In the yellow, looks a little bit like two lions with manes here. Here are the manes, here are the heads.

7. And in the center, the blue area, that again looks like the tiny figure of an old man waving two blankets.

(middle D) (Old?) White hair, bent over posture.

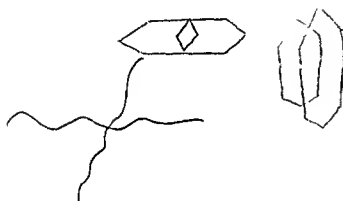
8. And the orange things at the outside, they look like moles or Mexican jumping beans.

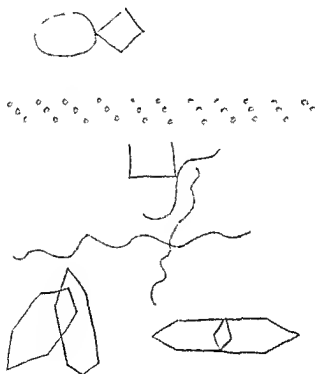
Looks like moles—things that are on farms and make mole heaps. They have a snout with which they dig, here (points—side yellow)

9. And this . . . I don't get that, except the green, I mean the yellow part before the mole-like figures, looks like a map of Africa.

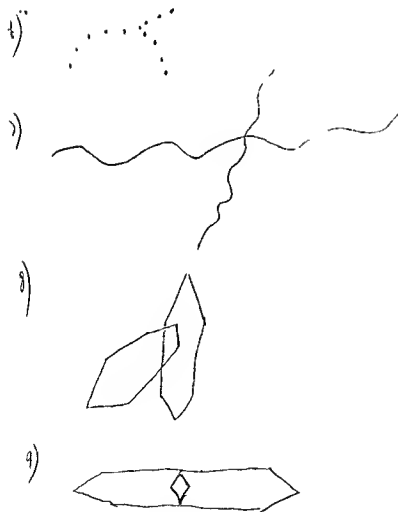
(Africa?) Or South America, I don't know, one of them. They both sort of come to a

RECALL



DICK—BENDER-GESTALT TEST**INITIAL TESTING*—1957**

*The initial Bender Gestalt test was administered according to standard instructions followed by the subject's recall of the figures after an interval of 45-60 seconds.

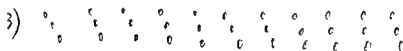


TOM—BENDER-GESTALT TEST

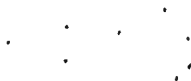
INITIAL TESTING*—1957



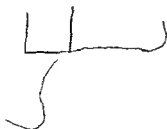
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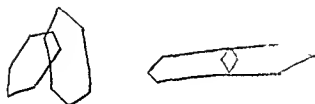


*The initial Bender Gestalt test was administered according to standard instructions followed by the subject's recall of the figures after an interval of 4 to 60 seconds.



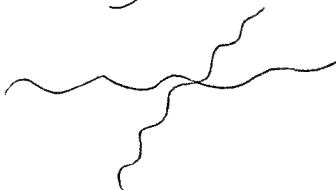
RECALL





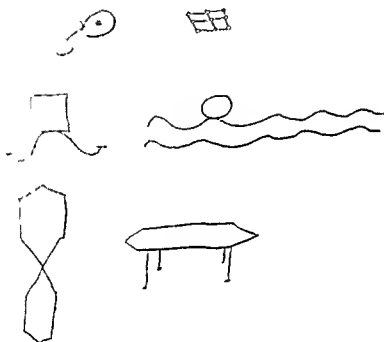
DICK—BENDER-GESTALT TEST

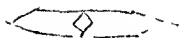
RE-EVALUATION*—1959



*The Bender Gestalt re evaluation was administered by Miss Miriam Asher according to standard instructions followed by the modification suggested by Hutt in which the subject is asked to modify selected figures in any way that renders them more pleasing and then to state his associations to the original designs and to the modifications

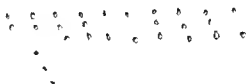
MODIFICATIONS





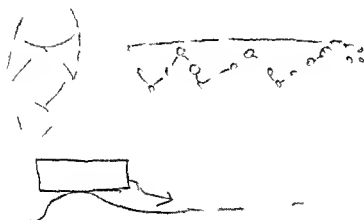
TOM—BENDER-GESTALT TEST

RE-EVALUATION*—1959



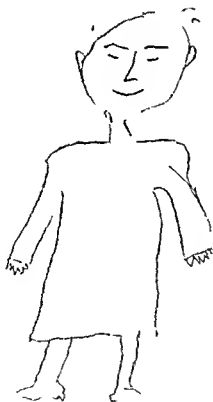
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MODIFICATIONS



ASSOCIATIONS

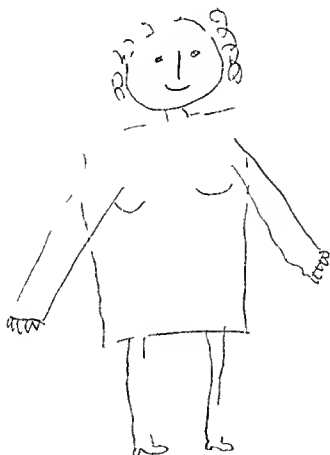
- A (O) It suggested something in imbalance and so I felt that the two should be left at a constant relationship to each other. Here they appeared to be sliding off.
- (M) It looks like some kind of printing within a frame in abstract painting. (What makes it look like that?) The fact that this outside thing framed it. (Else?) The frame also holds it together.
- 2 (O) It doesn't suggest anything. It's just a pattern and it wasn't going anywhere.
- (M) I just started doodling around and eventually ended up with this animal thing, anteater thing and then I drew the ants as little dots. (Else?) Those things really look like little wheels like it could move pretty fast if it wanted to. (What's the relationship between the wheels and the anteater? Are they related?) Just in the sense that the wheels indicate mobility and in the way that I drew the anteater they were attached to the legs and I tie those two together.
- 4 (O) Something on a hill.
- (M) So I thought I'd make it more than a square, an incomplete square and I thought I'd make it look like something like a sled going down a hill. (What makes it look like that?) It didn't seem to be sliding down a hill so I put an arrow there to indicate where it was going to go if someone gave it a little push. (Else?) No.
- 6 (O) That reminded me of two crossroads.
- (M) And then I thought that crossroads are not that wiggly and so I straightened them out and made straight lines instead. (What reminded you of crossroads?) The two lines crossing.
- 7 (O) I didn't think that meant anything together so I took it apart.
- (M) At first I was going to draw a ballistic missile but then I thought they looked too primitive for that so I made them firecrackers that are about to go off. (What suggests that?) They have a top, a body and a fuse on the end. This shape reminds me of some explosive.



DICK—DRAW-A-PERSON**INITIAL TESTING—1957**

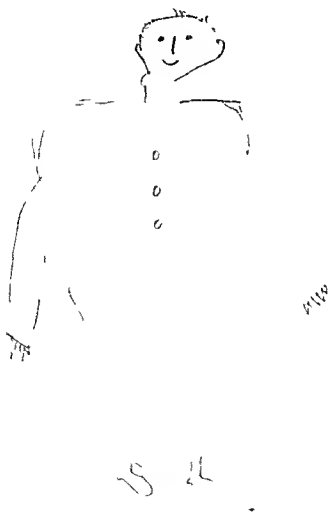
TOM—DRAW-A-PERSON**INITIAL TESTING—1957**

DICK—DRAW-A-PERSON
RE EVALUATION—1959



DICK—DRAW-A-PERSON

RE-EVALUATION—1959



TOM—DRAW-A-PERSON
RE-EVALUATION—1959



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